LEVEL 2

Science Booklet

Agahi Public School ____________________________

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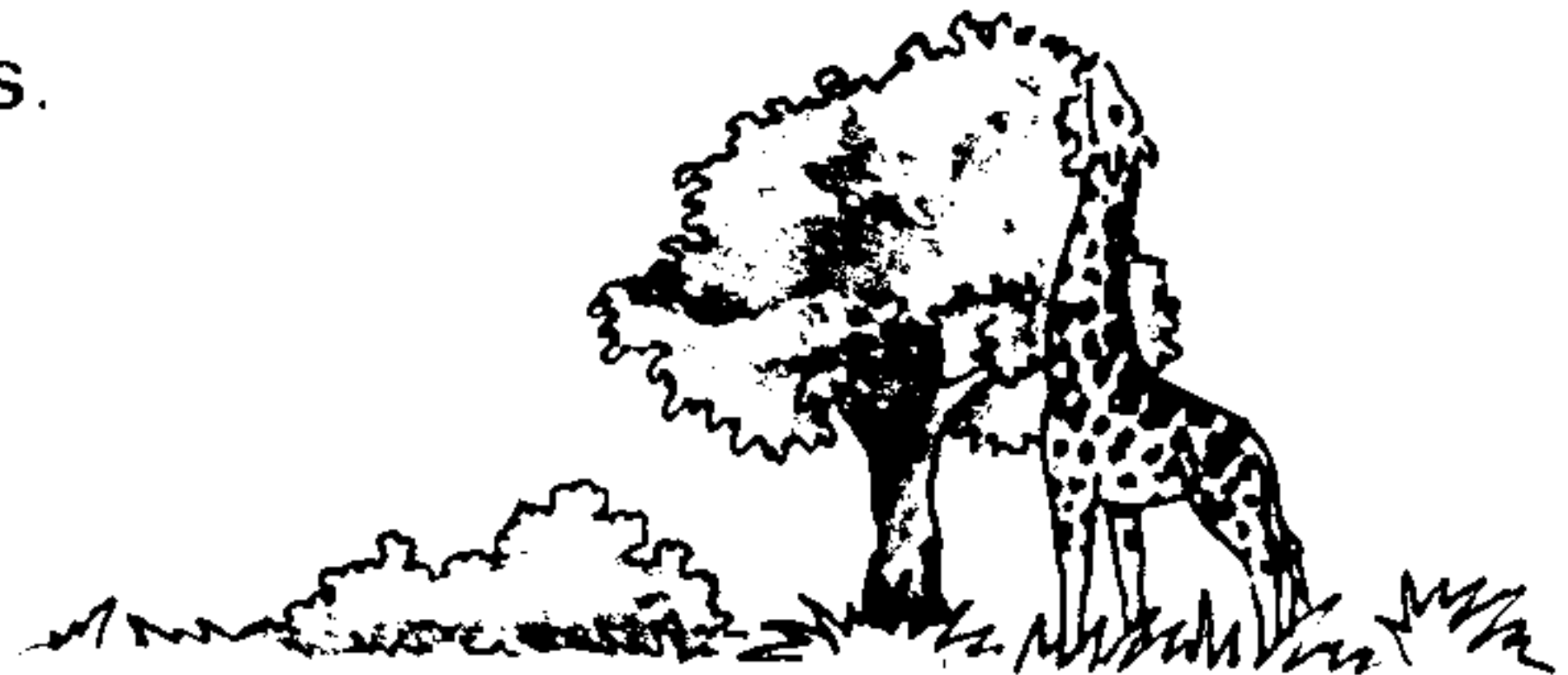
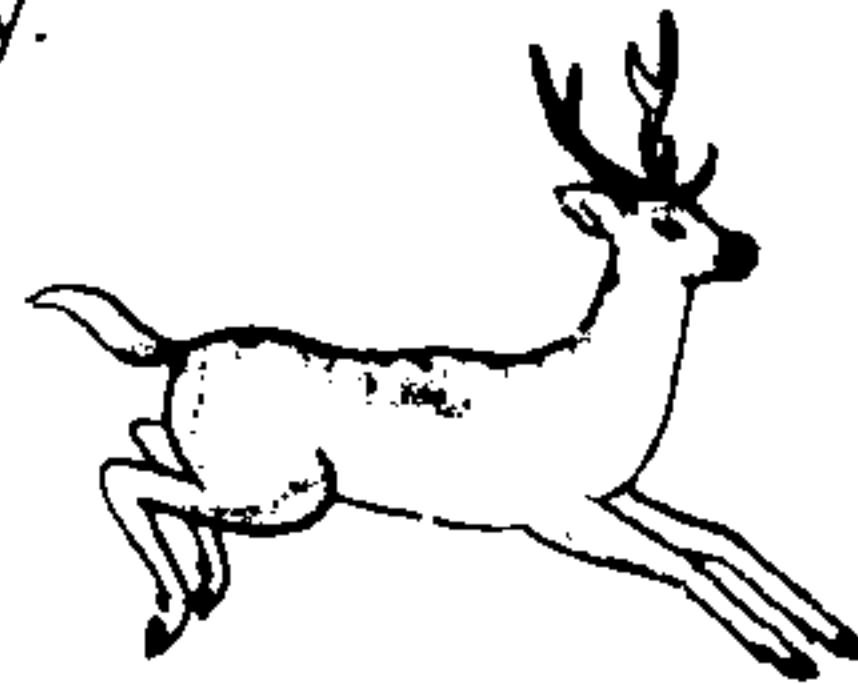
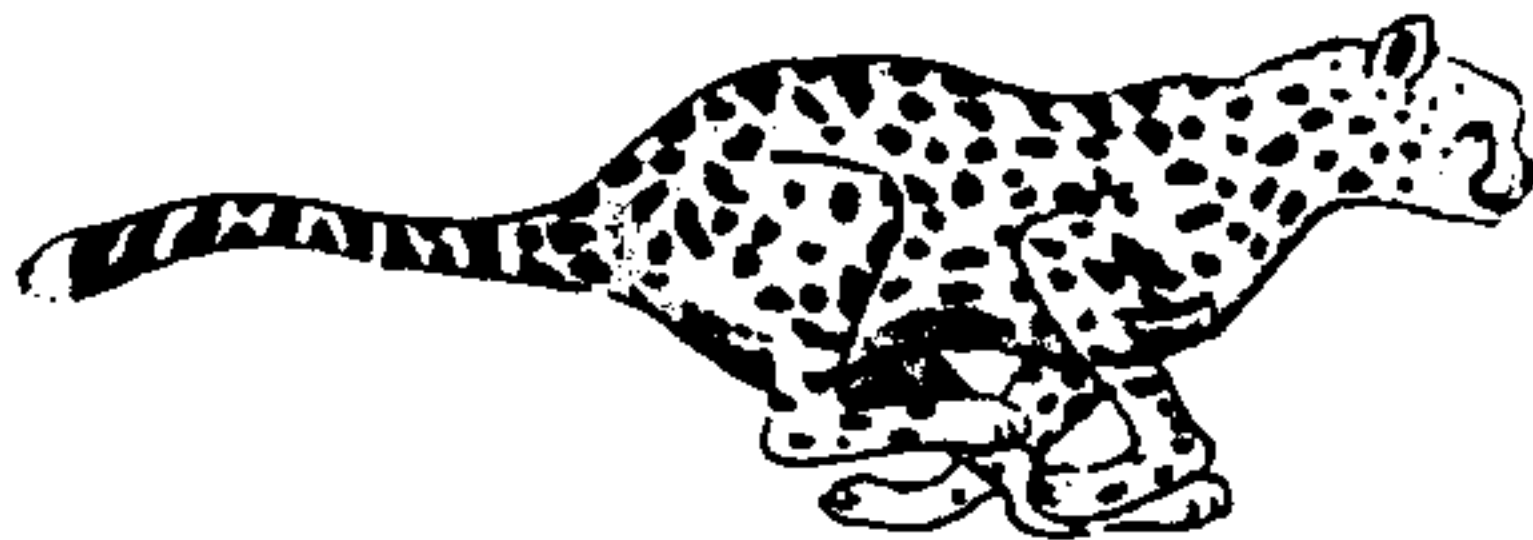
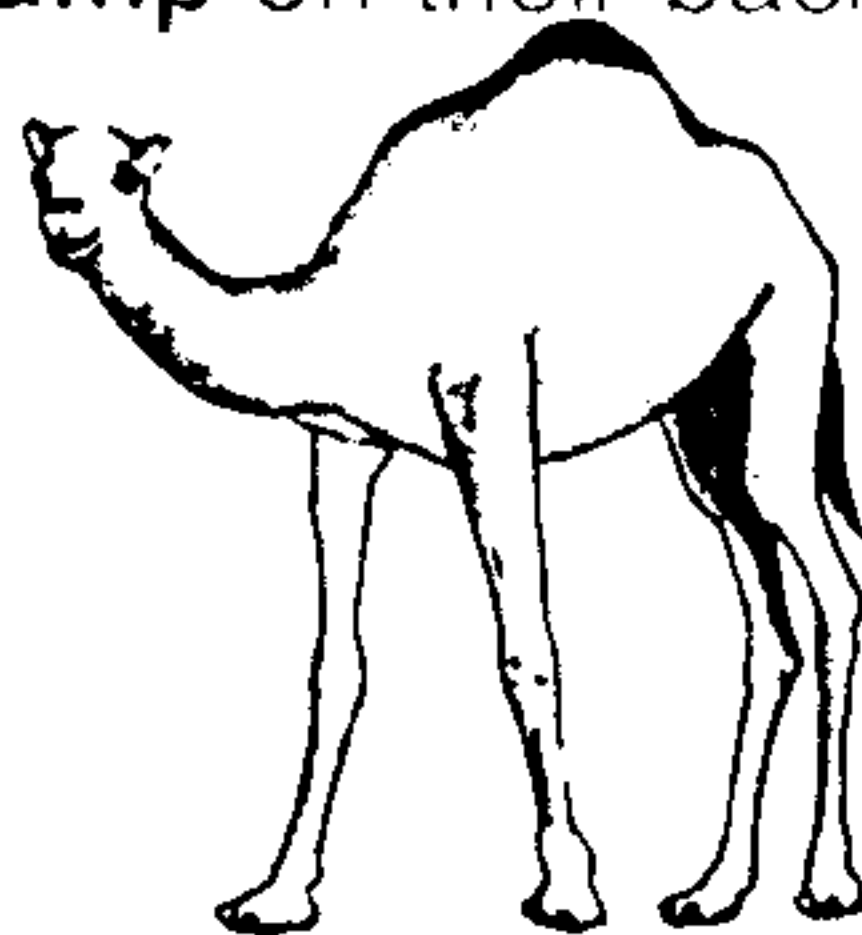
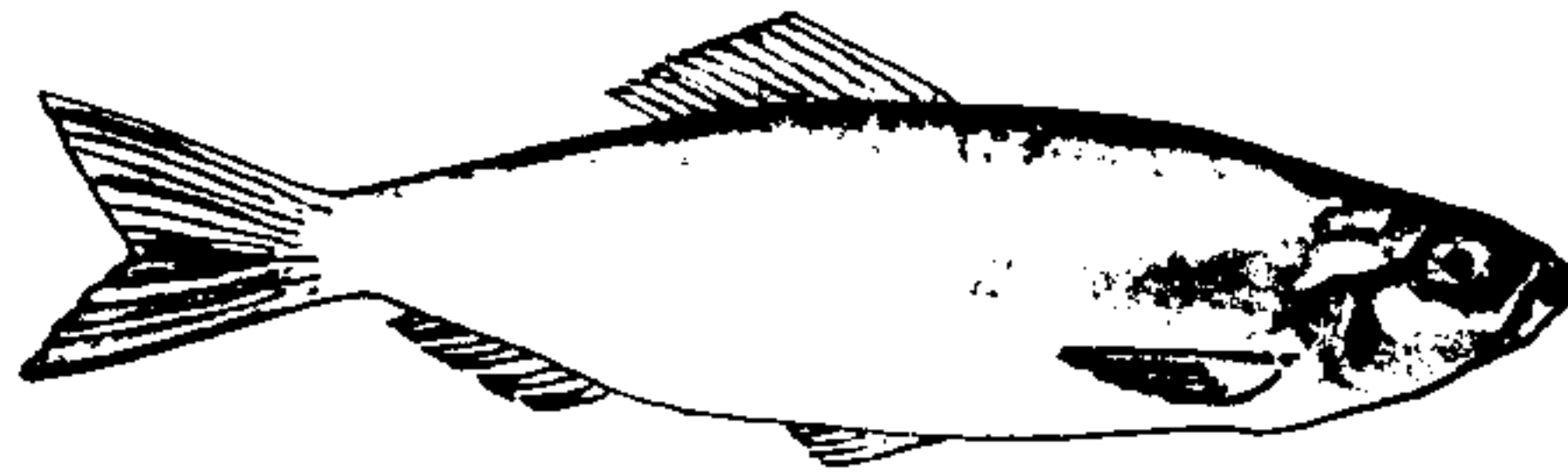
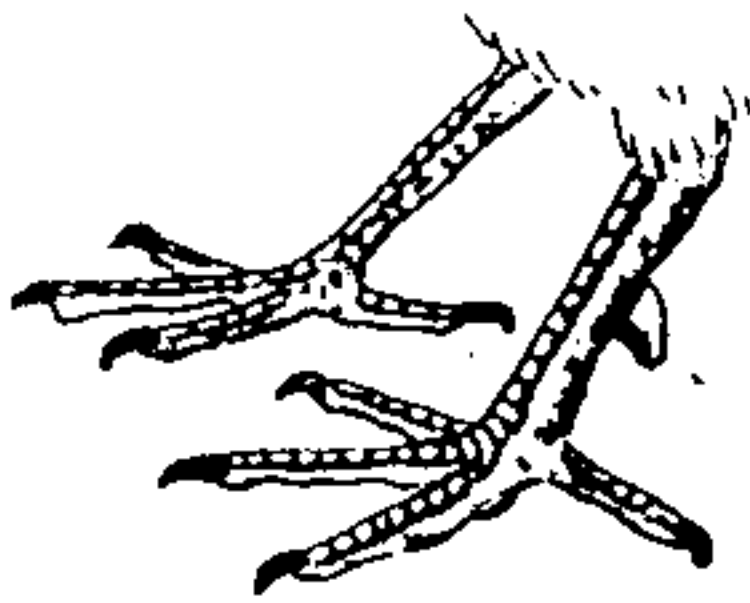
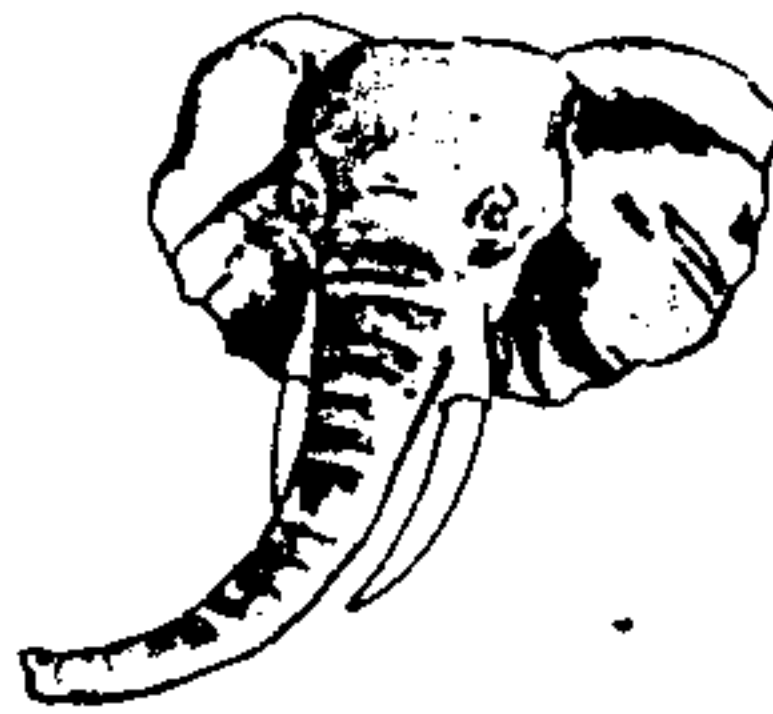
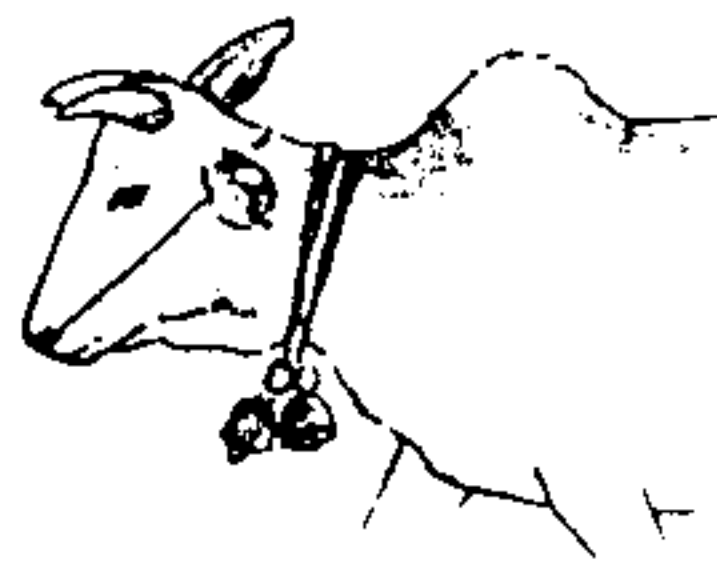
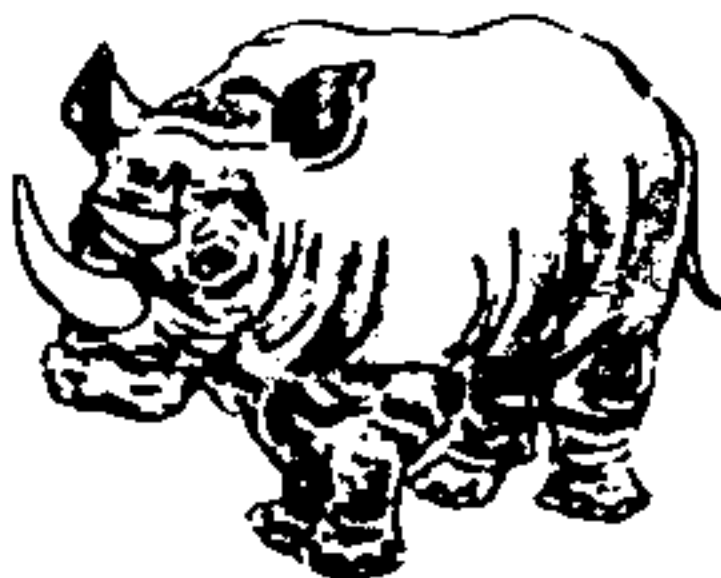
Table of content

Animals

Many **creatures** live on our earth. Some live on the **land** and others live in **water**. Some stay in the **air** for a long time.

Some animals have long **necks**.
These animals eat leaves.
They need long necks to reach
the fresh leaves on tall trees.

Some animals have strong **legs**. They can run very fast. They need strong legs to catch other animals. They eat other animals.
Some animals need strong legs to run away.

Some animals have very long, sharp **teeth**.
Some animals have a **hump** on their backs.

Birds have **wings** so that they can fly.

Fish have **fins** on their bodies. Can you think why?

Creatures do not all have the same shape. Some are big and some are small. Some are tall and some are short.

Here are some things which creatures have:

claws   a trunk   long teeth   horns

a tail   a hump   a beak   a fin

a thick skin   scales   fur   feathers

Animals, birds and fishes are different from human beings. Their bodies are shaped in different ways. They behave in different ways.

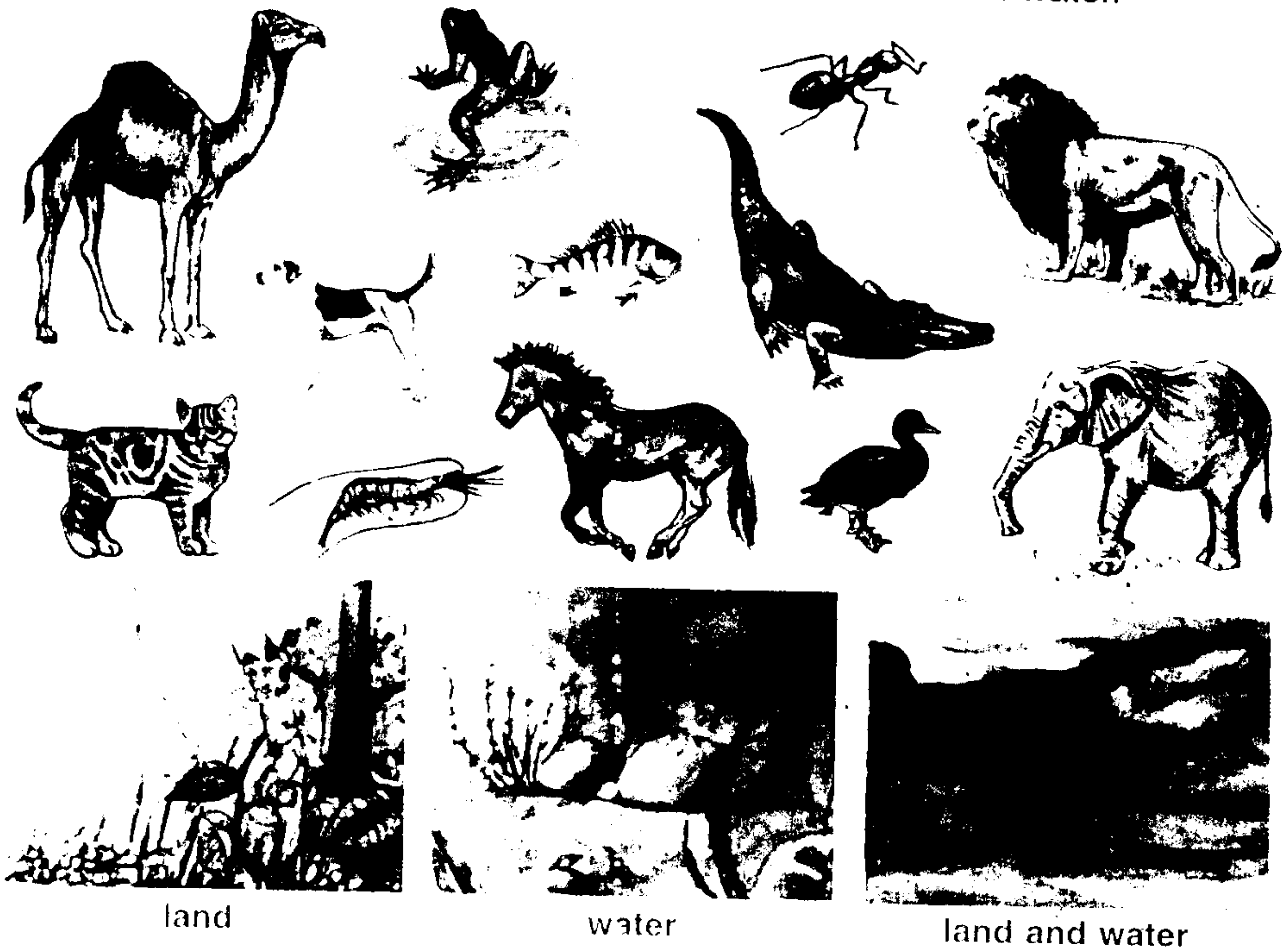
Think of the ways in which all these parts are used.

Animals' Habitats

Different types of animals live in different habitats.

Some animals live on land, like elephants, horses, lions, dogs, cats and camels. Some animals live in water, like fish and prawn. Some animals live on land *and* in water, like frogs and crocodiles.

Activity 3

Find out where these animals live by drawing lines to their homes. Use a blue pencil for water animals. Use a brown pencil for land animals. Use a black pencil for those animals that live both on land and in water.

Note for Teachers
Explain to students that 'habitat' means the natural home of a living thing—its living conditions or environment.

tivity 4

ok at the pictures on page 3, and fill in the blanks.

Elephants, horses, lions and cats are found on ____________.

2. Fish and prawn live in ______________.

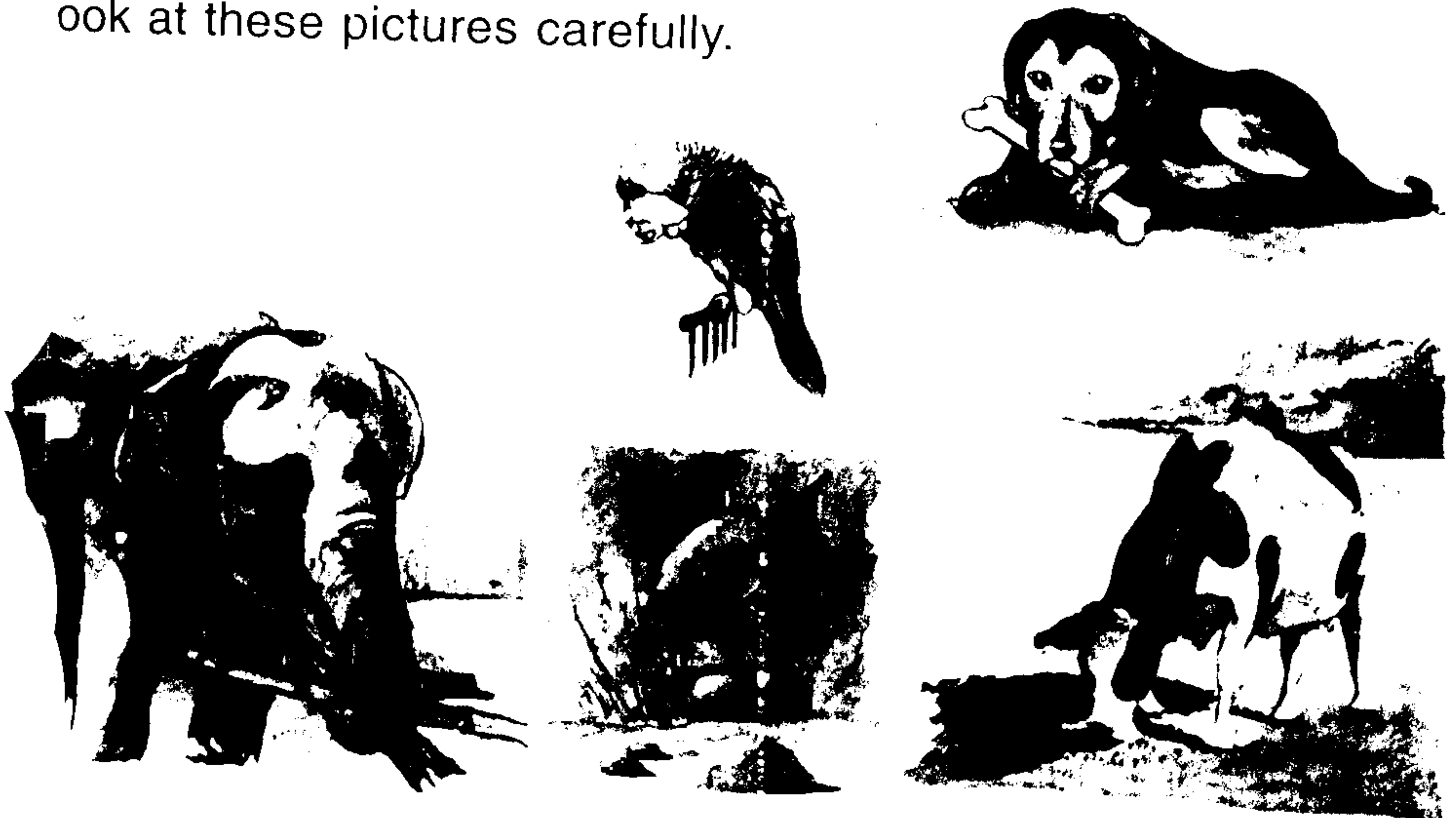
3. Frogs live on ______________ and in ________________.

Animals and Their Food

Different animals eat different types of food.

Goats and cows eat grass. Fish eat smaller fish and seaweed. Parrots eat fruit. Elephants eat grass and sugar cane.

Some animals eat meat, like dogs, cats, lions, tigers and bears. Some animals drink milk, like cats.

ook at these pictures carefully.

for Teachers

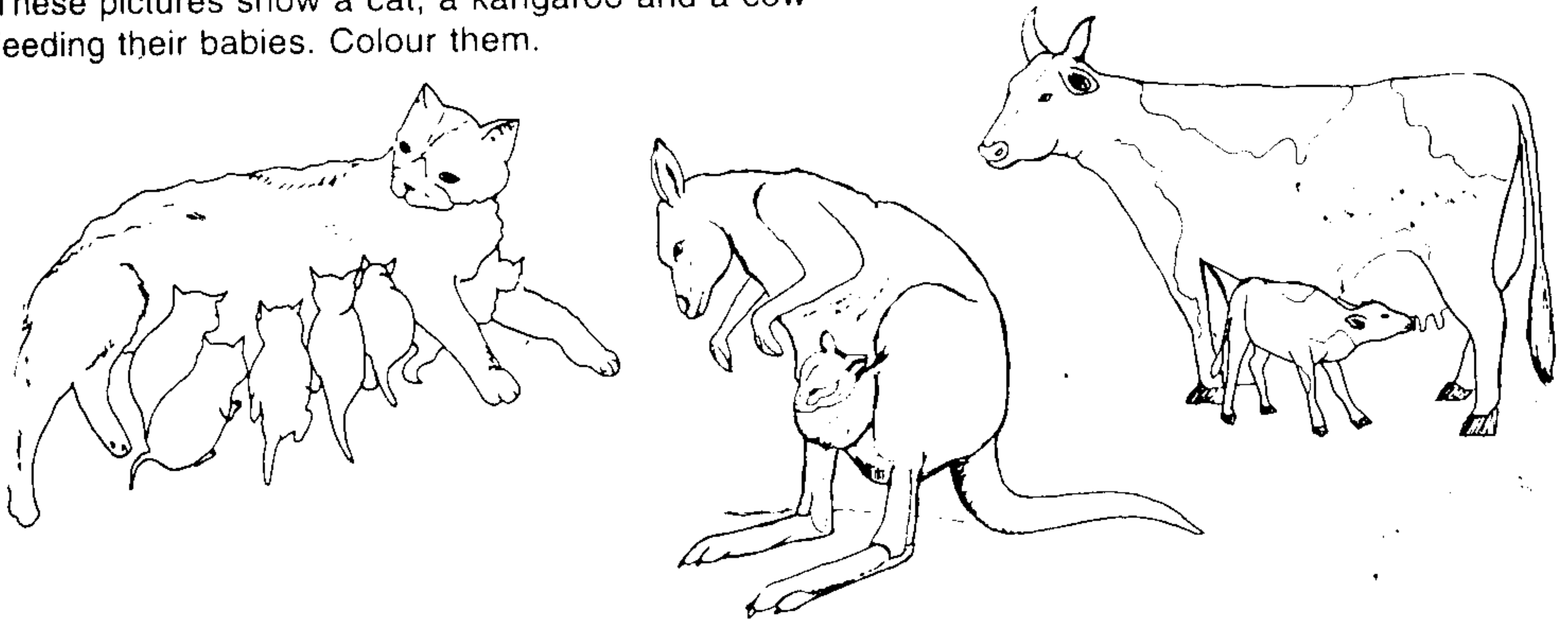
'eed' is a plant that grows in the sea, especially on rocks at the edge of the sea.

Different Types Of Animals

Mammals

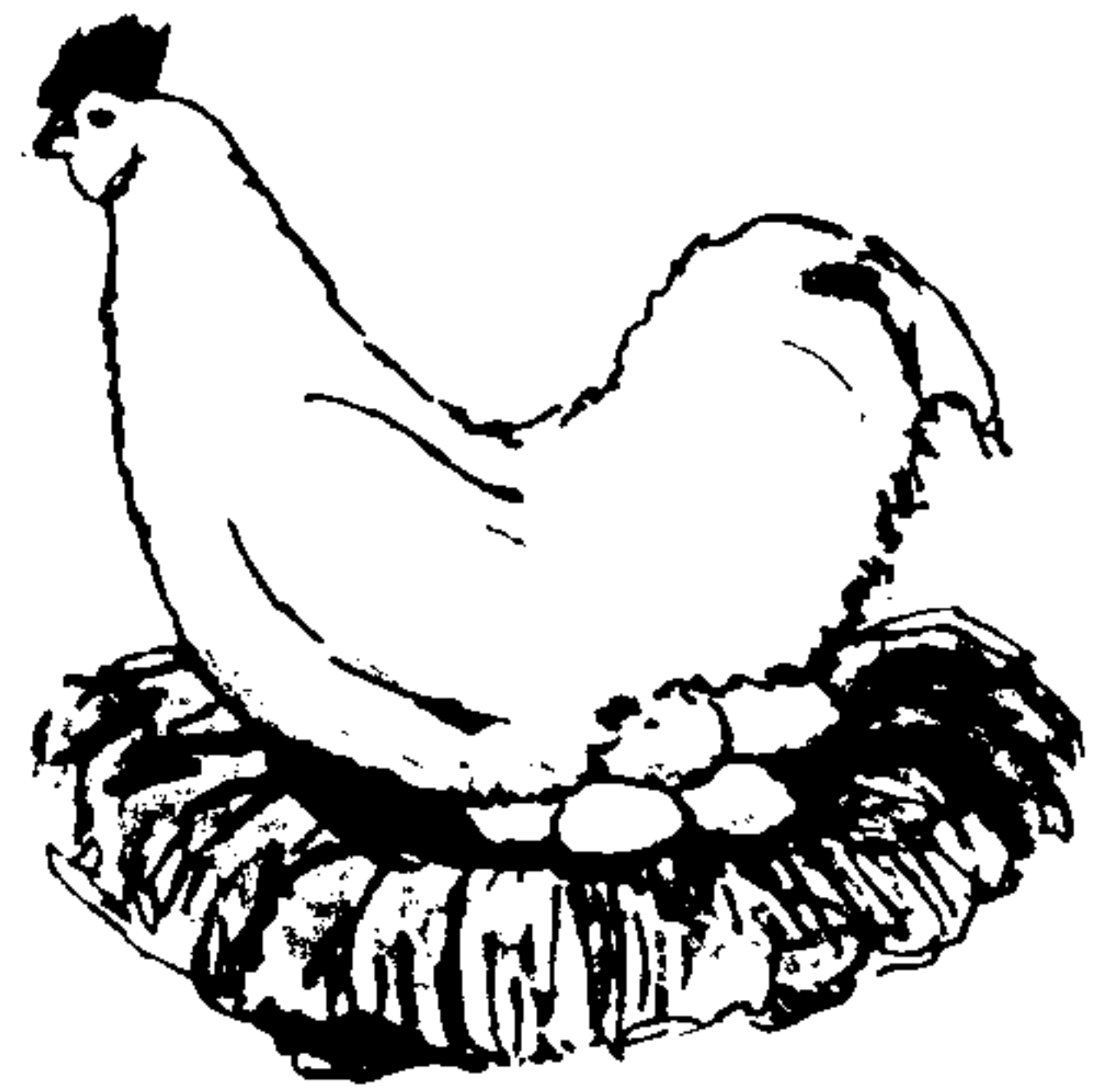
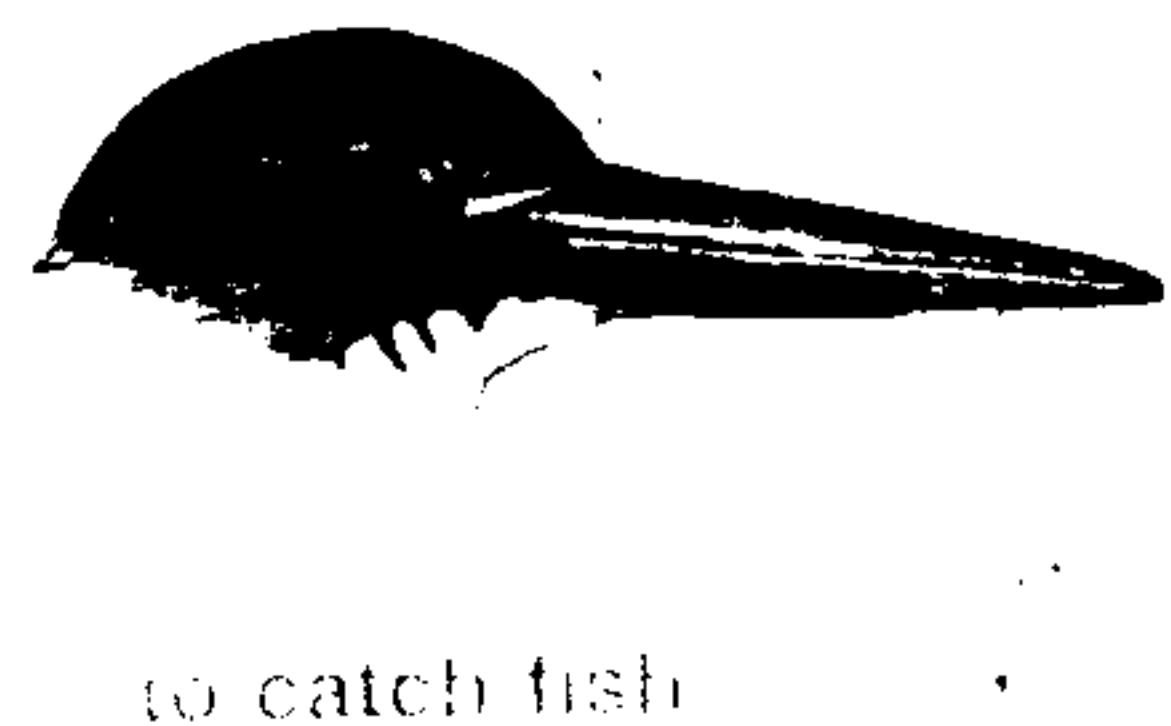
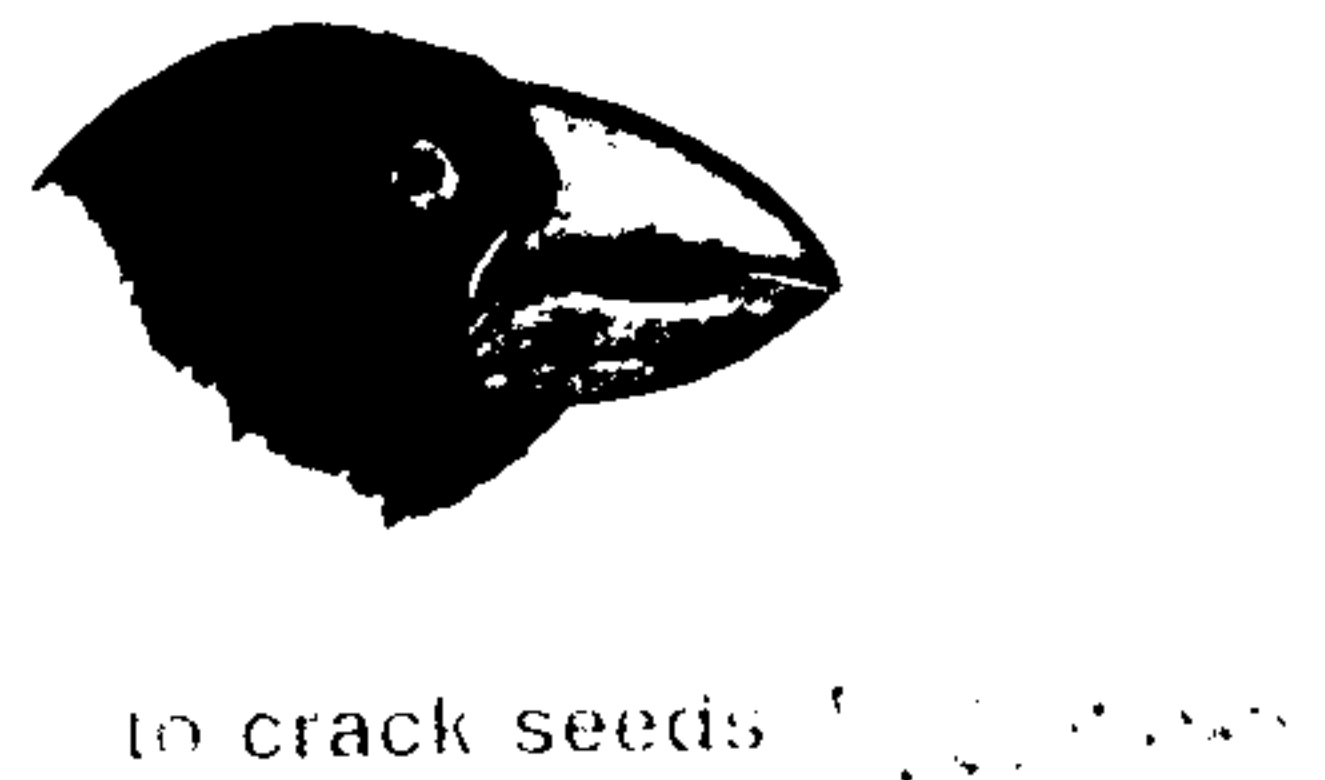
Animals that have hair on their bodies, give birth to young ones and who feed them on milk are called mammals. These include cows, cats, kangaroos, whales and bats. Some mammals eat plants, some eat animals and some eat both plants and animals.

Activity 5

These pictures show a cat, a kangaroo and a cow feeding their babies. Colour them.

Activity 6

Make a list of 10 mammals not mentioned in your textbook.

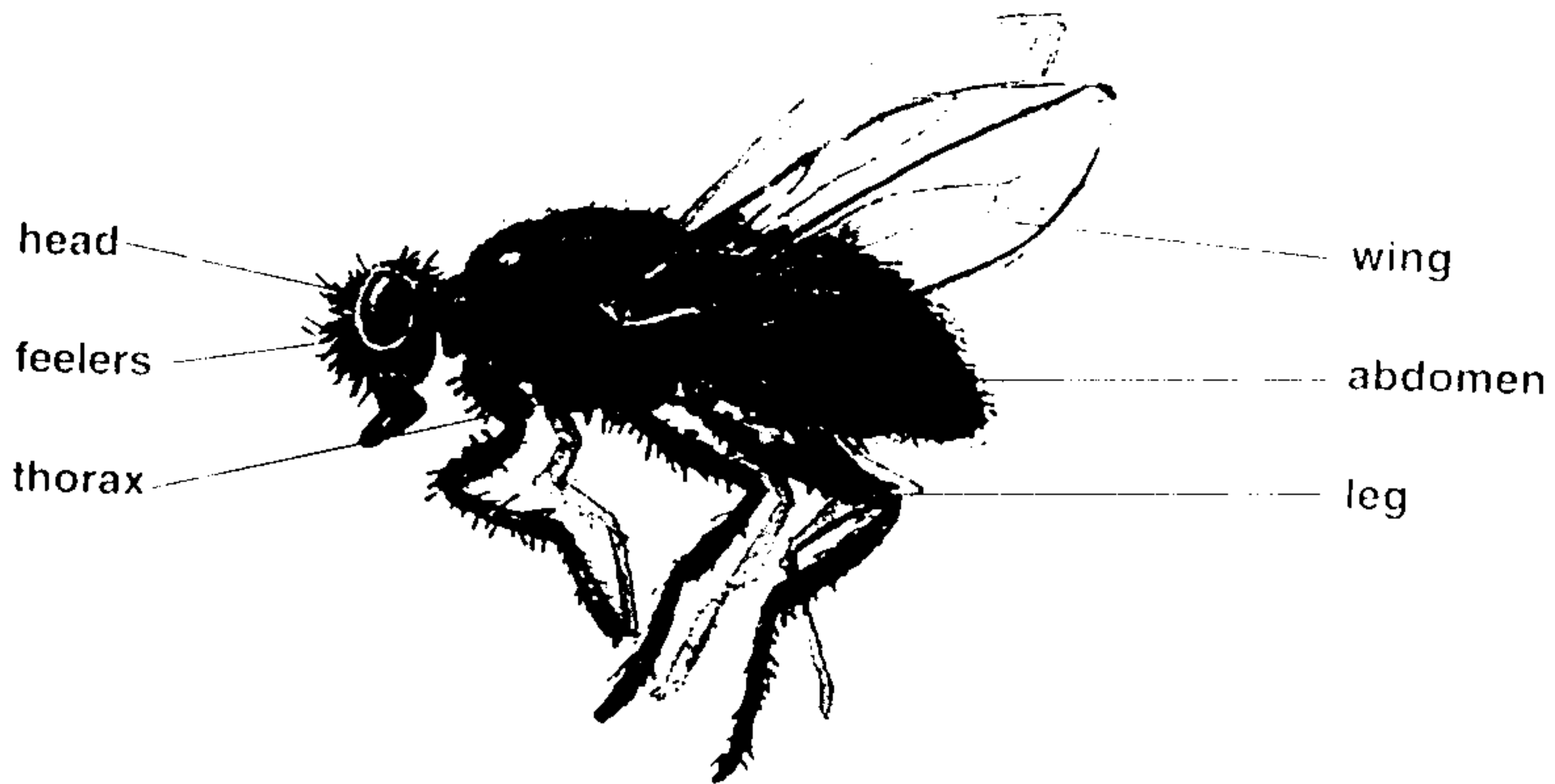
irds

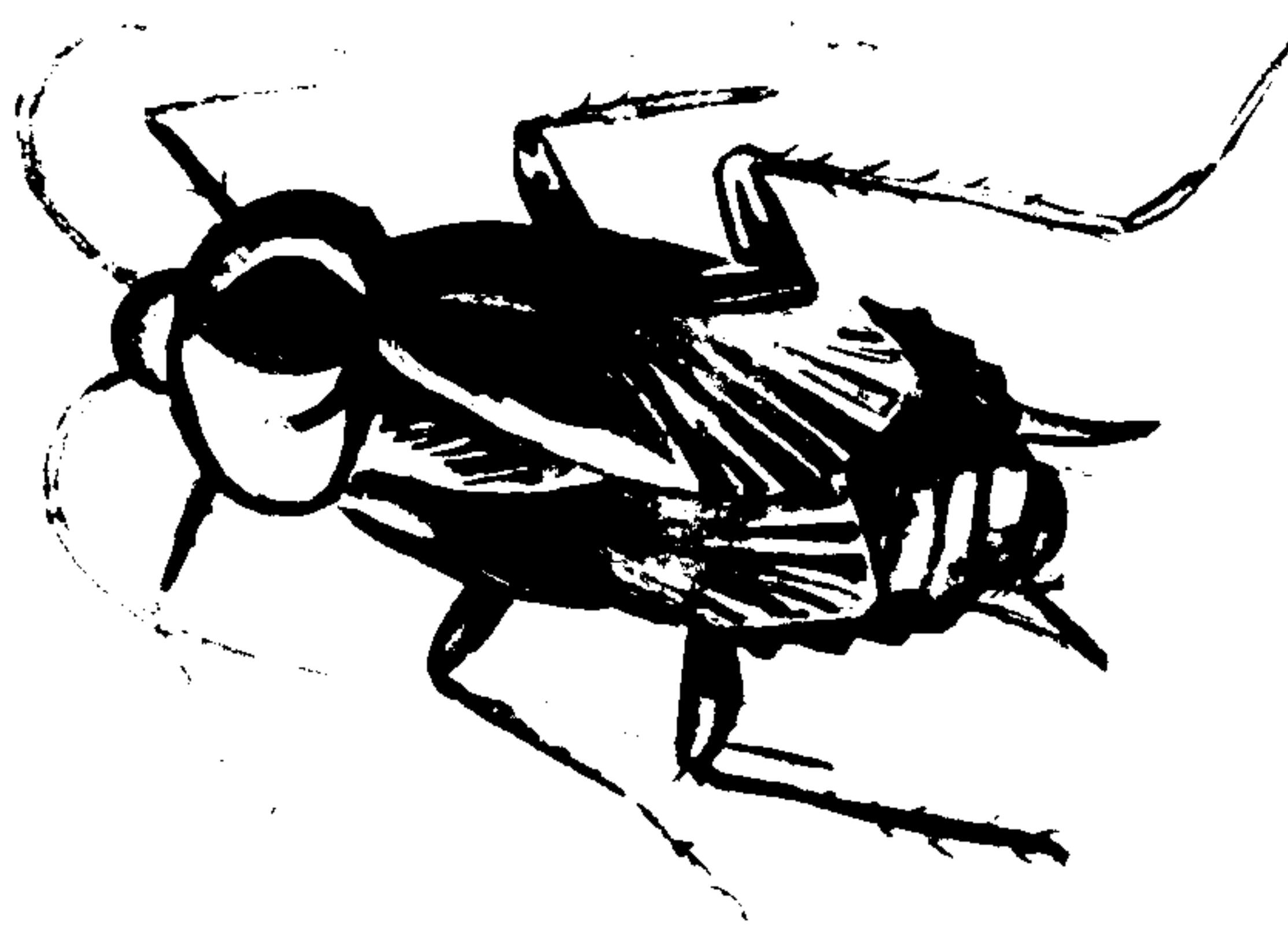
irds are animals that have feathers on their bodies. ome birds can fly with their wings. They lay ggs with hard shells.

Birds have different kinds of beaks.

Activity 9

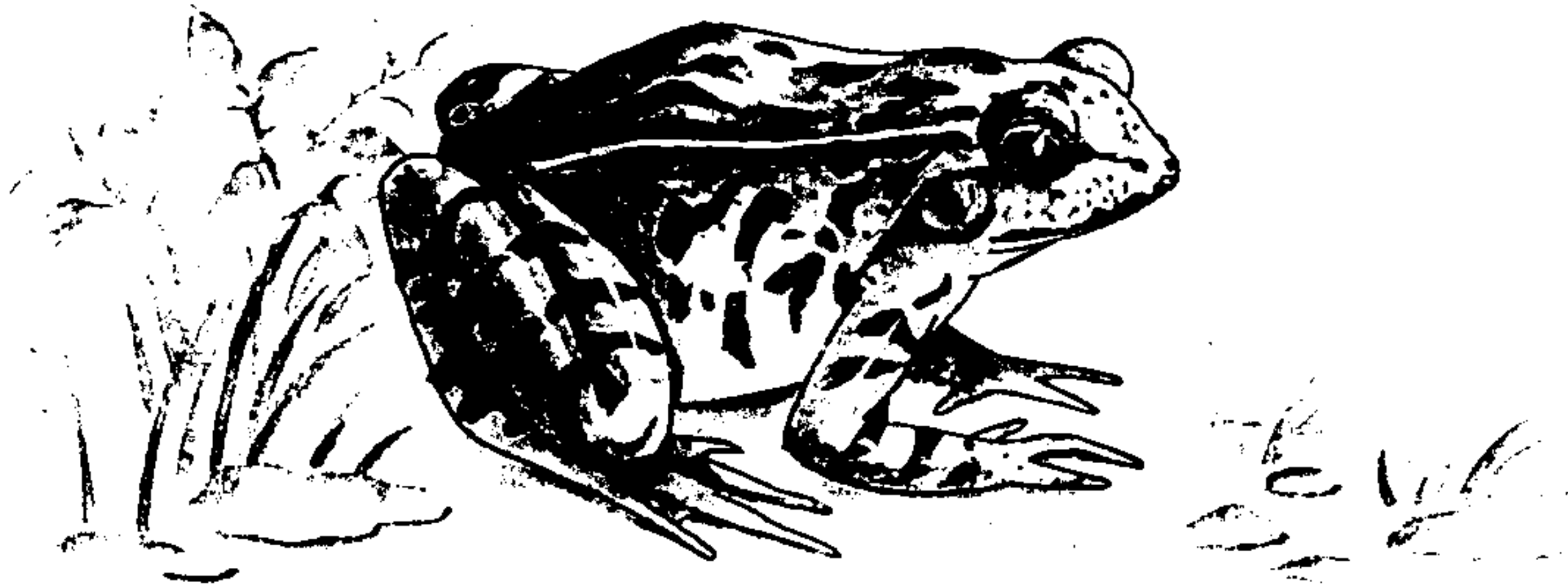
Collect different kinds of feathers and paste them in your scrapbook. Write the name of the bird to which each feather belongs.

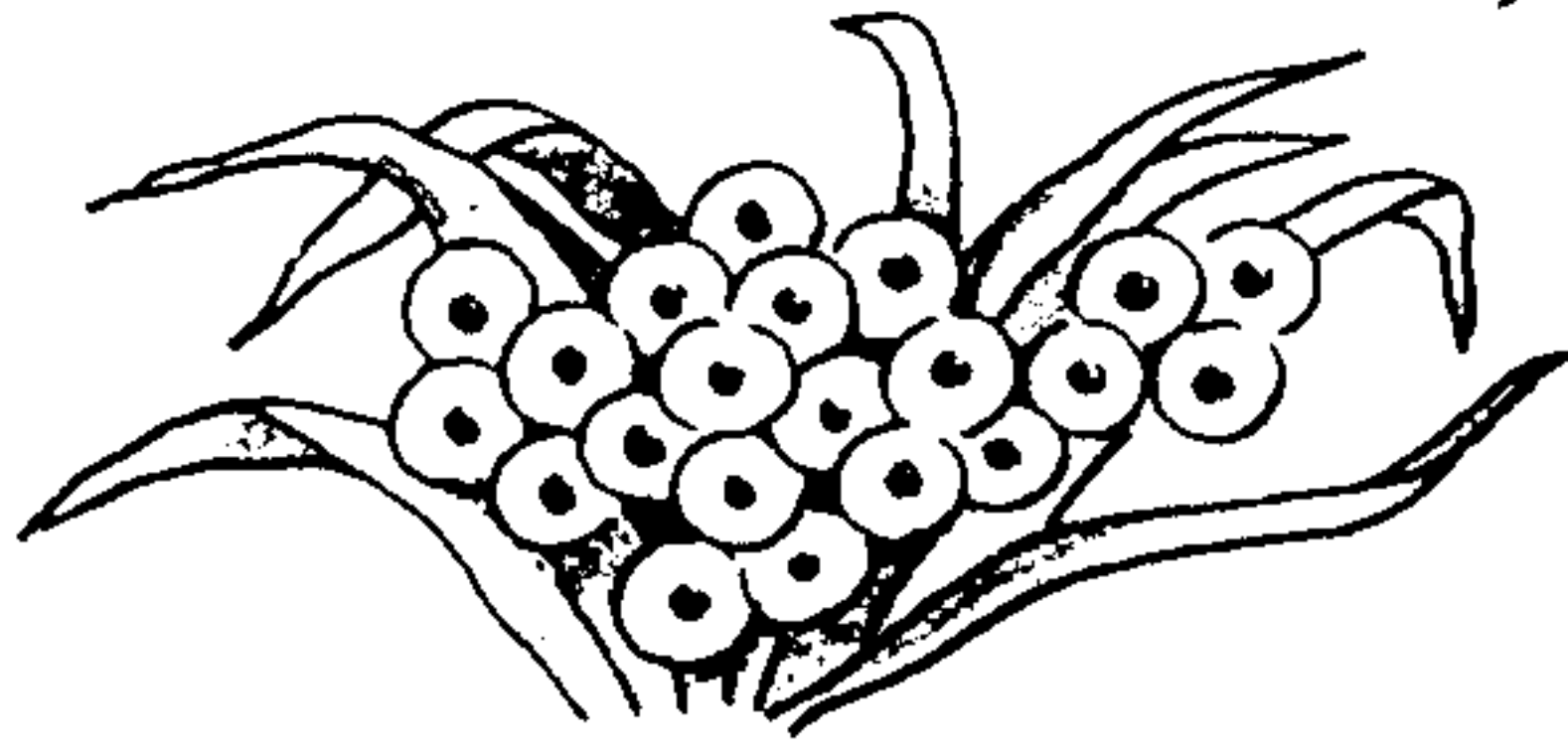
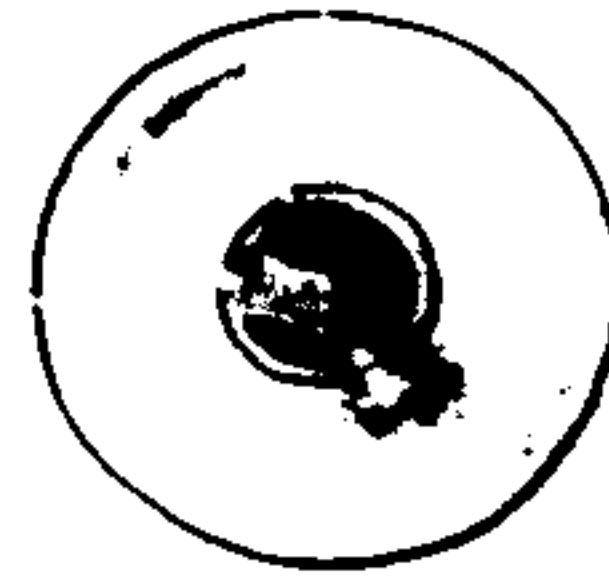
Insects

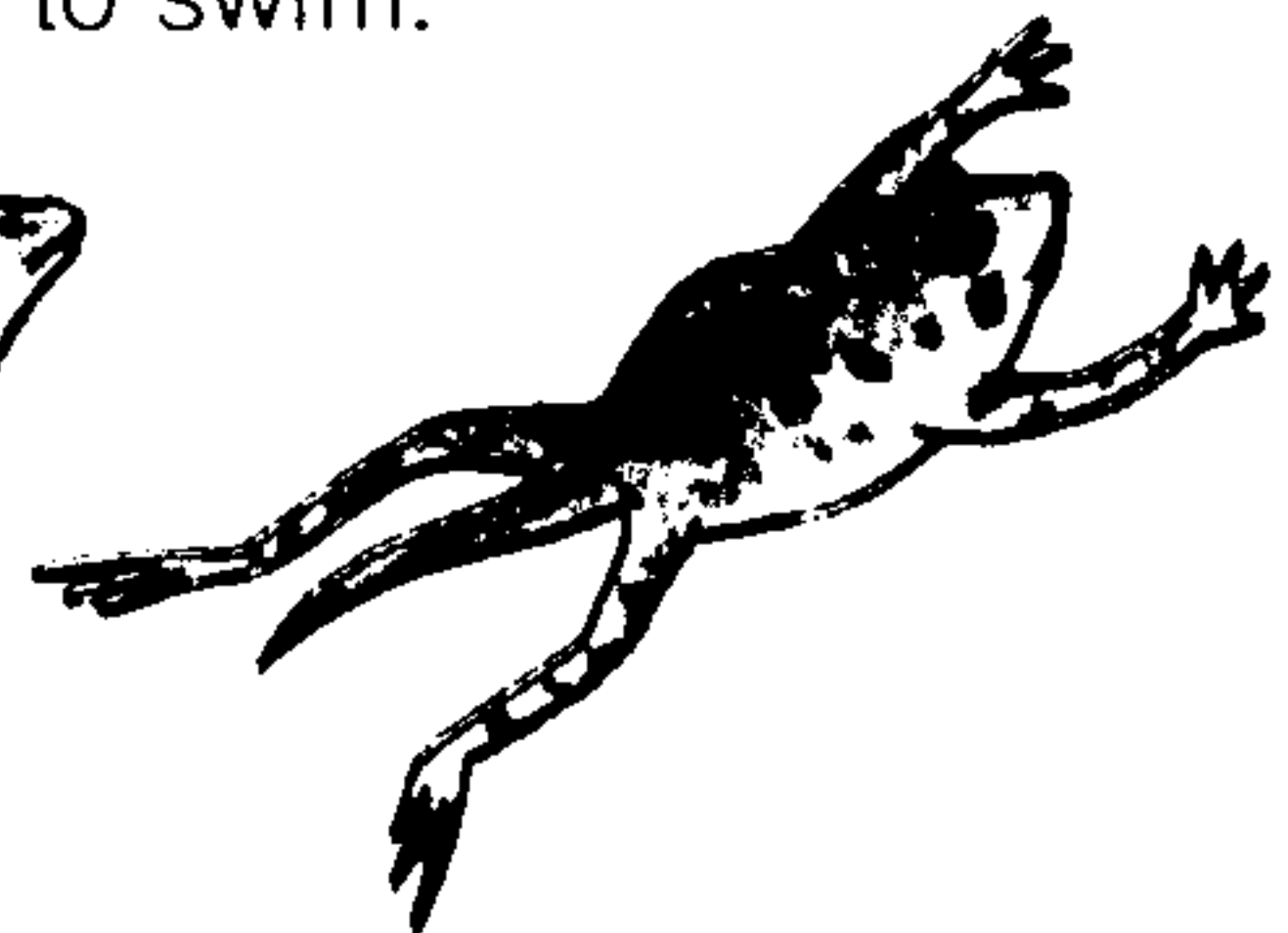
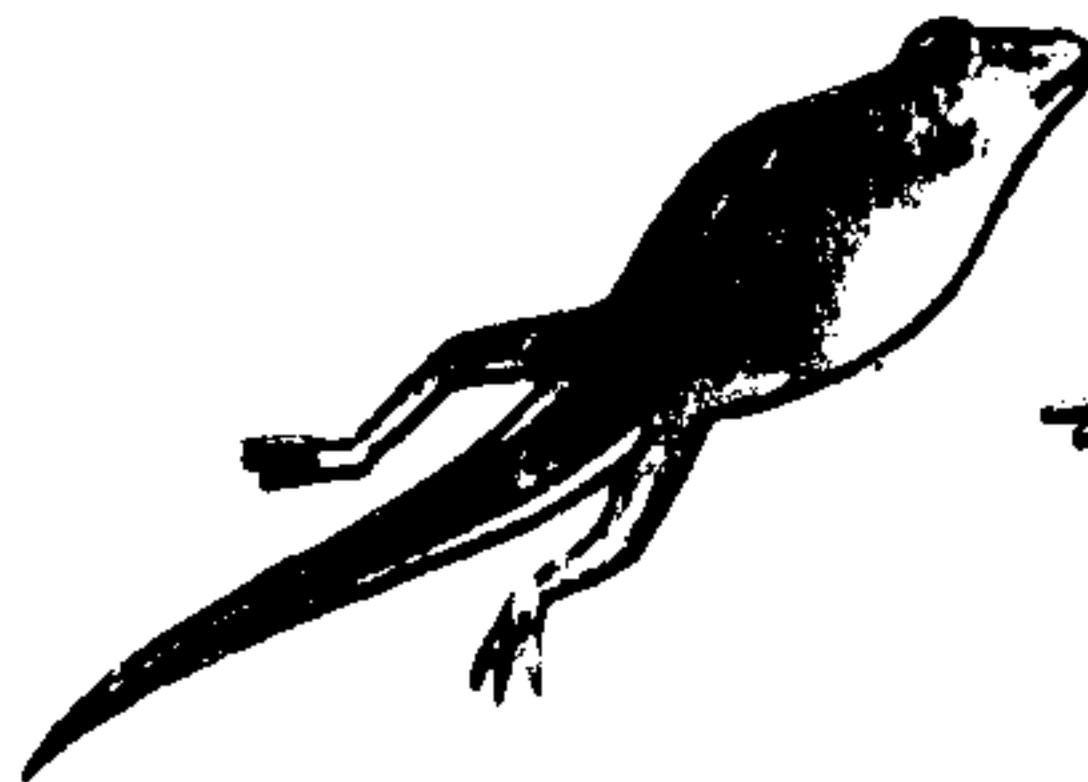
'There are many different types of insects. Insects are usually very small.

\n insect has six legs. Its body is divided into three main parts: head, thorax and ıbdomen. It has two large eyes. An insect has feelers. Some insects have wings ɔ fly.

ɔtivity 10

Iame the body parts of the cockroach.

The Frog

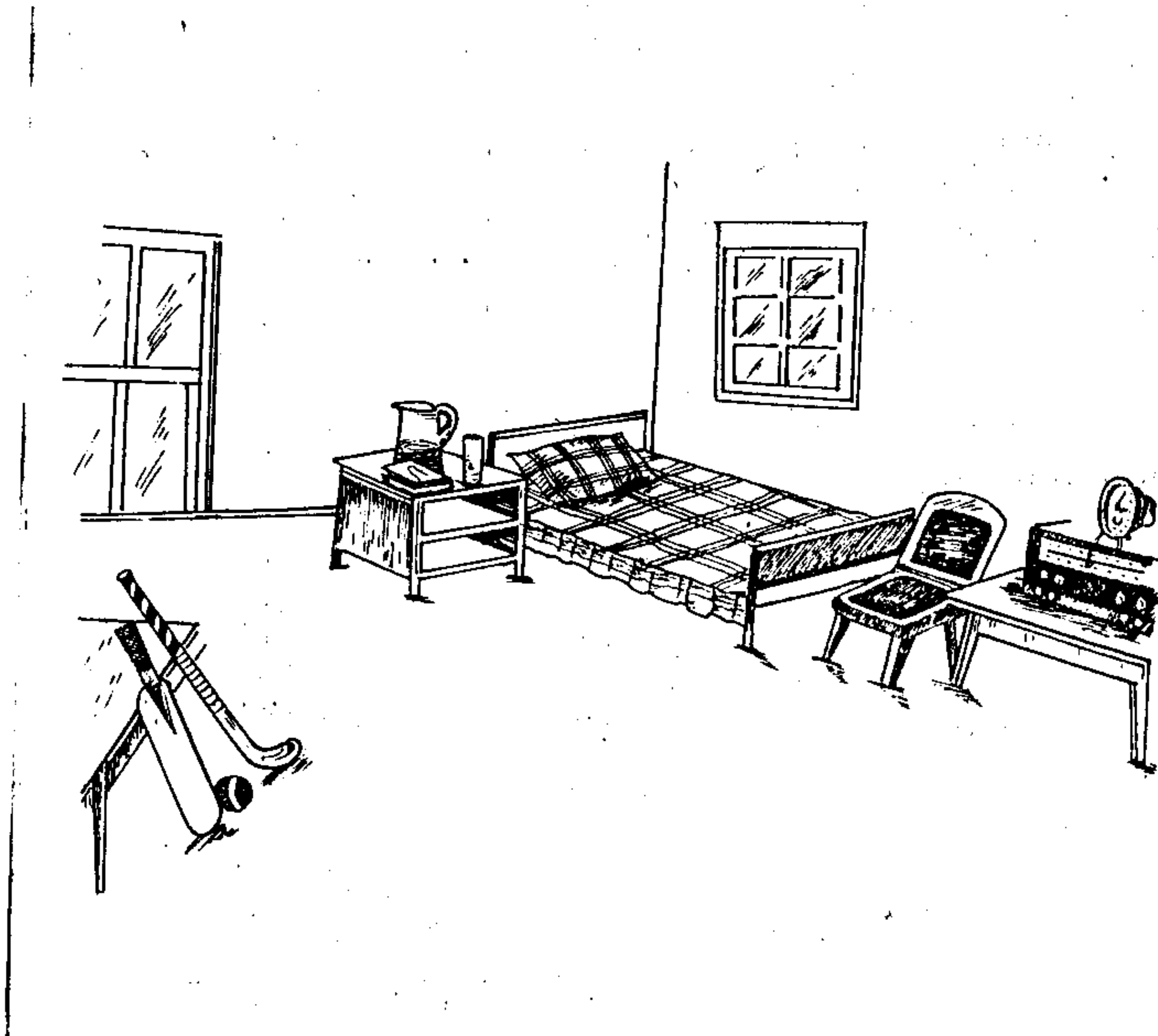
Look at this picture of a **frog**. Try to find a live frog and look at it.

Here is another picture. It shows a **pond**. Can you see any frogs in the picture? What are they doing?

These pictures show you how a small egg grows into a frog.

Eggs

The **tadpole** grows inside the egg.

The tadpole comes out of the egg. It begins to swim.

The tadpole's jaws grow. The back legs grow. The front legs grow.

The tail disappears. The tadpole becomes a frog.
The frog leaves the water.

SOLIDS

A stone, a ball and wood are hard things. Hard things are called solids. Look at this picture.

We can touch these things. We can feel these things. These are made of solid material. All these things are solids.

The solids which we see in the picture are:-

A table, a bat, a hockey stick, A side-table, a shelf, a bed, a pillow, a cot, a chair, a radio, a watch, a jug, a glass, window-pans, a door, and a window.

Some more solids:

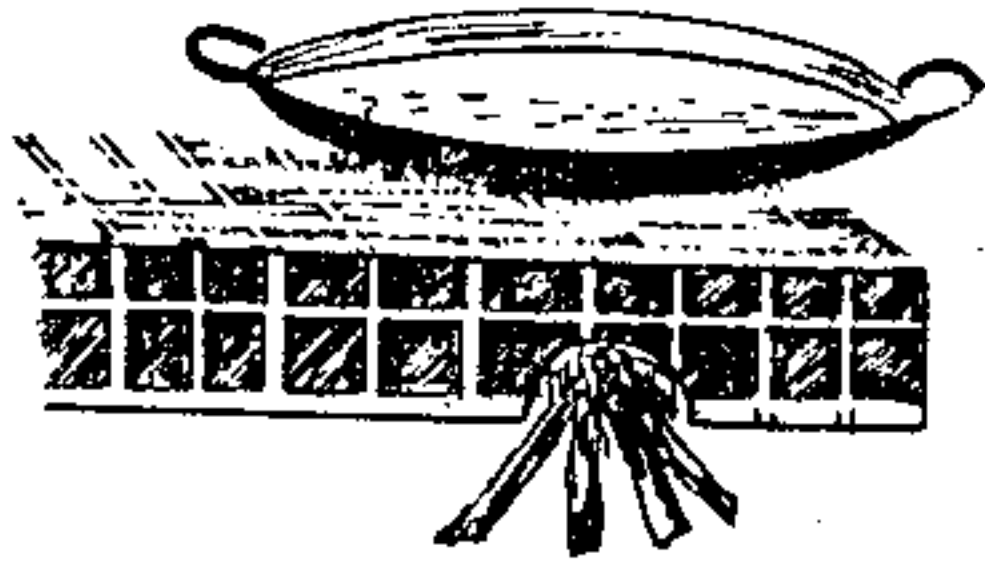
Steel, gold, stone, coal, clay, a pencil, a piece of chalk, a pen, a book, an umbrella, a bulb, an ink-pot, a chair, a wooden plant, a foot-ball, a bucket, etc.

CONCLUSION

Things that are hard and have definite shape and si. are known as solids.

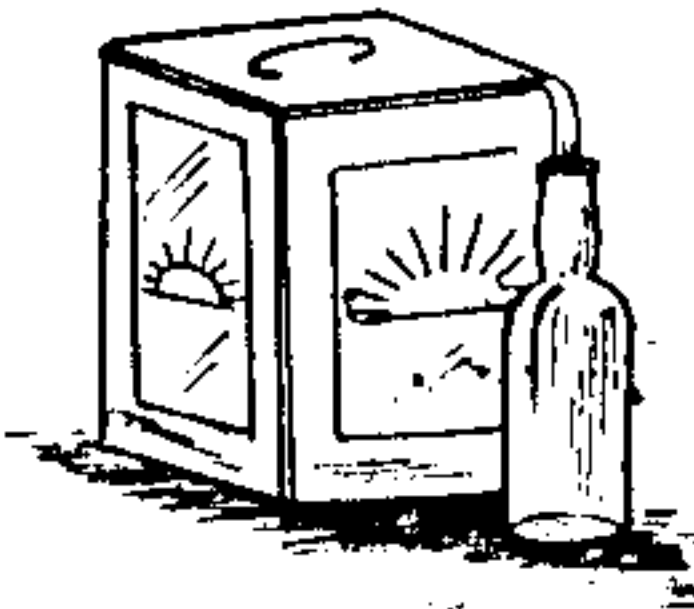
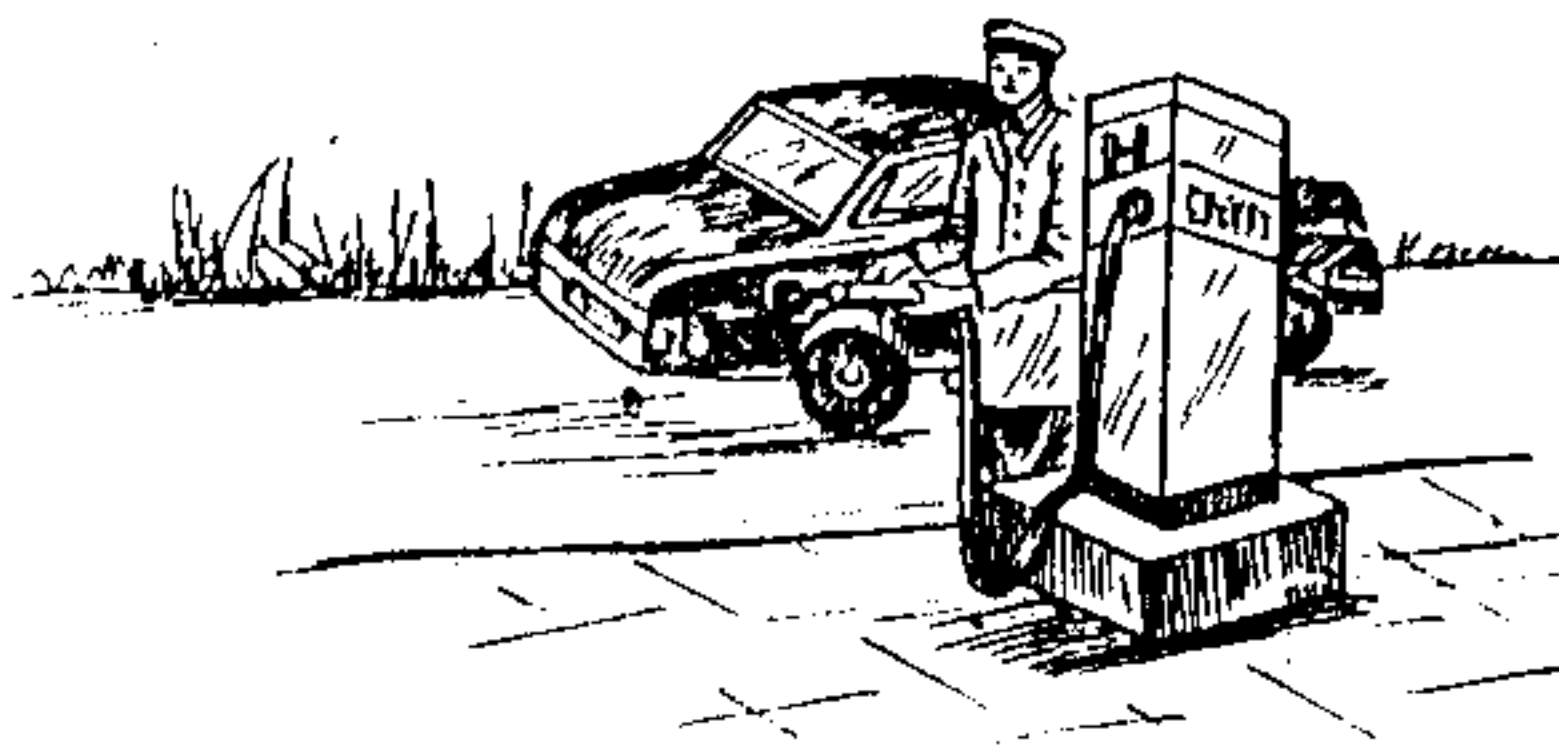
LIQUIDS

What is coming out of the tap?

It is water.

What is in the cauldron ?

It is milk.

Cold drink . . Tea

This man is filling petrol in the car.

Water, milk, kerosene oil and petrol are all liquids.

Water is not solid. Milk is not solid. Water and milk are called liquids. Water, milk, kerosine oil, and petrol are all liquids.

Some more liquids:

Honey, glycerine, juices and mustard oil etc.

CONCLUSION

Material things that flow, occupy space and acquiring the shape of the container are called liquids such as water, milk and honey etc.

EXERCISE

1. What are liquids?

2. Name five material things that are liquids.

3. **Classify the following material things as solids and liquids.**

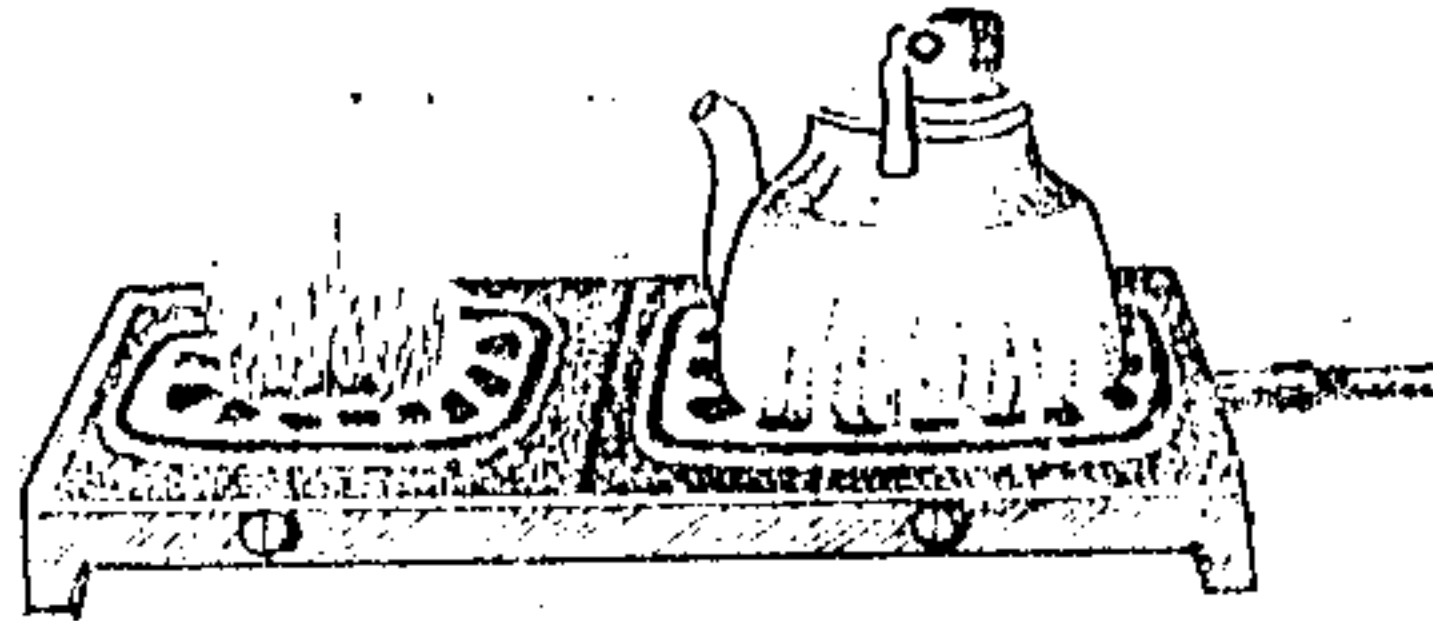
   Honey, stone, mercury, cocacola, coffee, a knife, water, glycerine, mustard oil.

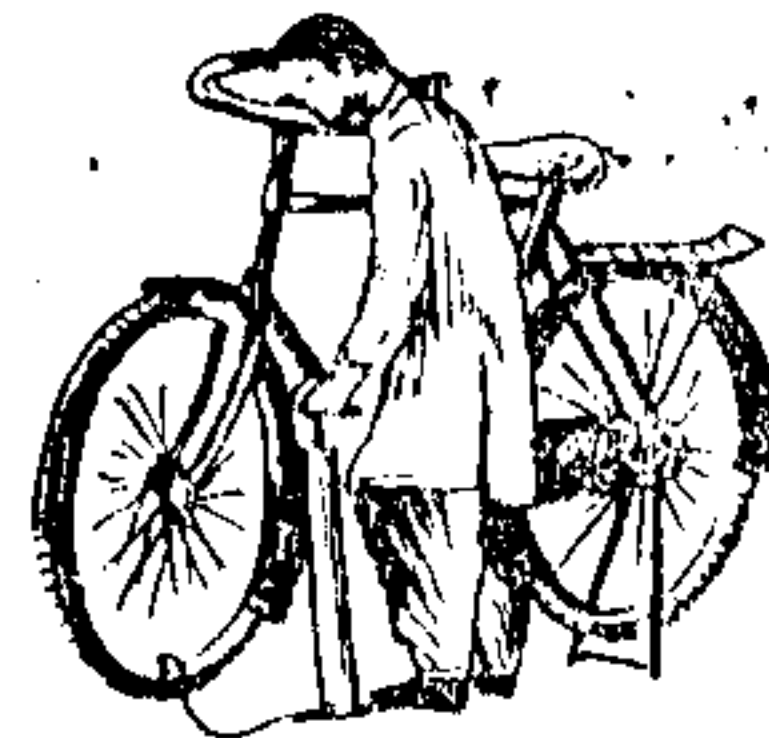
4. **Fill up the blanks.**

   (a) Steel is solid while milk is ______.

   (b) When ice is heated, it change into water. Water is ______.

   (c) Water is not solid but it is ______

Gases

What is in the balloon?
It is air.
What is coming out of the spout?
It is steam.
What is burning in the burner?
It is a gas.
Air is being pumped into the tyre.

Why is the plastic bag inflating?
Air is blown into the bag.

Air, steam and smoke are all gases.

What is a gas?

We know that matter exists in three physical states:

Solid, liquid and gas.

Gas is a state of matter. It has no fixed shape and no fixed volume. It fills the entire available space.

Air, steam and smoke are all gases.

Air is not a single gas. It is a mixture of Gases.

Air contain mainly the following gases.

(i) Oxygen

(ii) Nitrogen

(iii) Carbon-dioxide

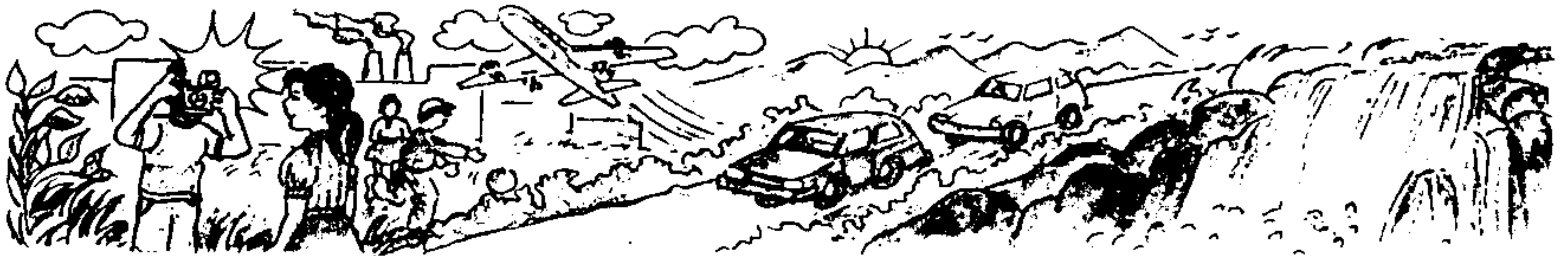
(iv) Water-vapours.

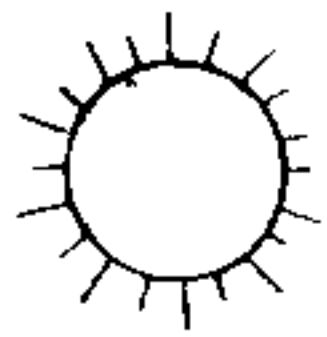
(v) Some rare gases.

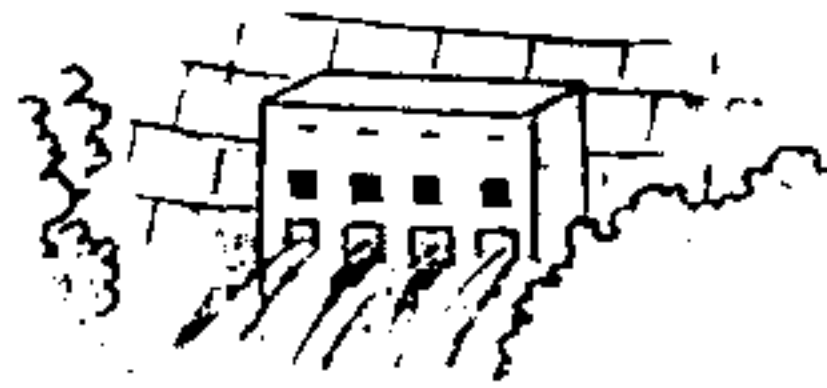
We will learn more about air and these gases in our higher classes.

Energy

Everywhere on our earth things are **happening**. When you come to school in the morning you have to move your legs to walk. To read this page you have to move your eyes from one word to the next.

Cars **move** from one place to another. Aeroplanes **take off** and **land**. Lights go **on** and **off**. Noises are made everywhere. Some kind of **energy** is needed to make all these things happen.

There are many different kinds of energy. You have already read about electricity. Electricity is energy. It can make things work. There are other kinds of energy, too.

Energy comes from these things.

the sun

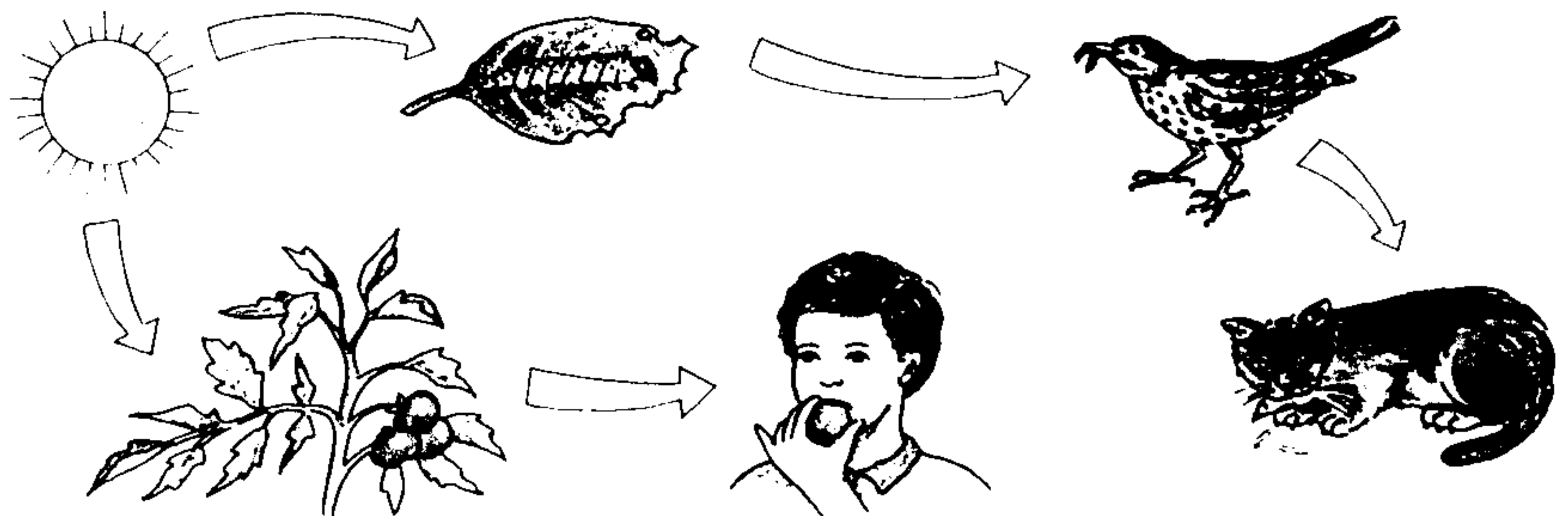
food

moving water

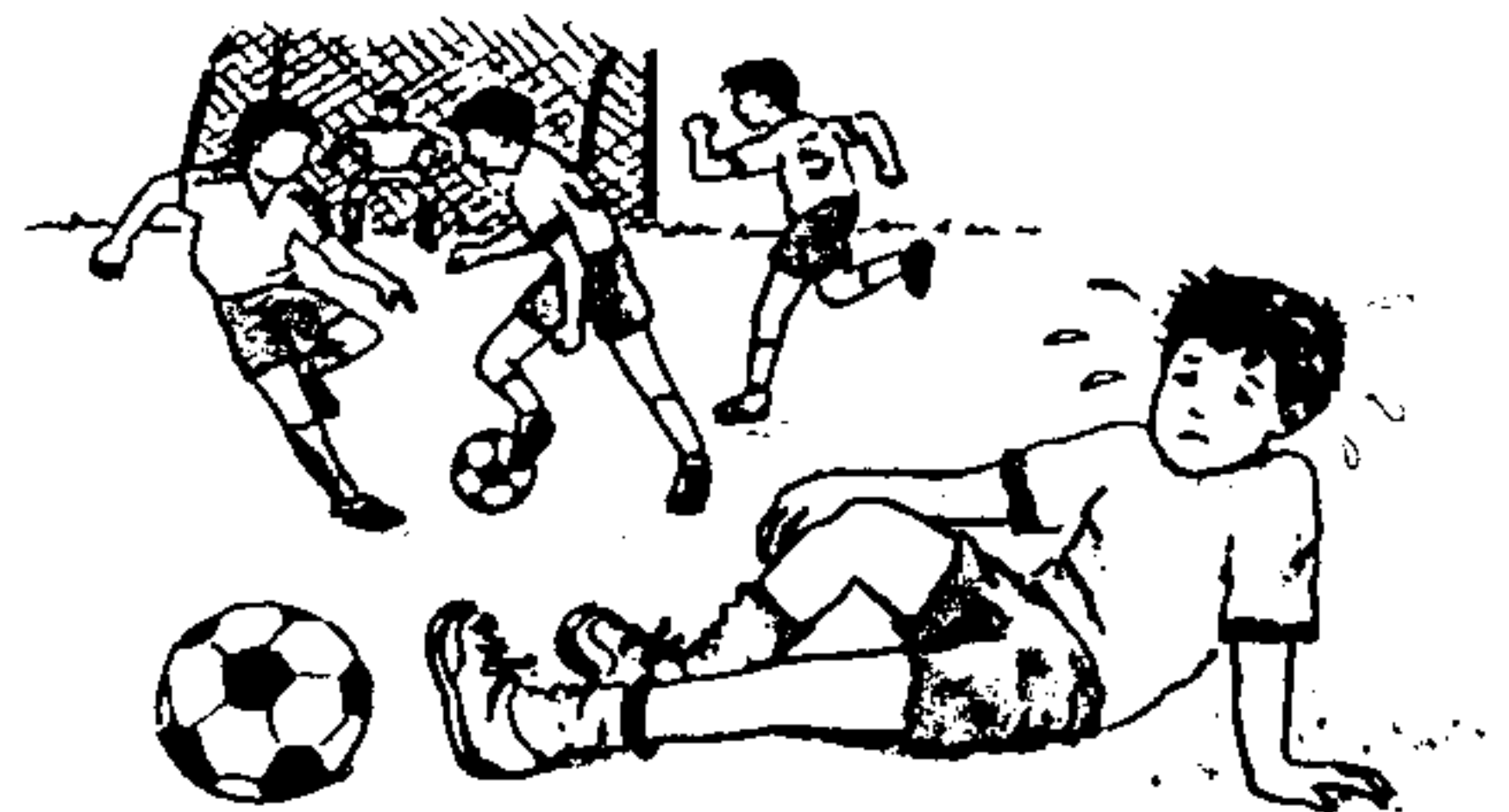
fire

There are also lots of other kinds of energy.

We use food energy to move around, play games, work and think. Much of the food energy that we have is used to keep our bodies warm.

Different kinds of food have different amounts of energy.

How does the energy get into the food in the first place? The pictures below will tell you.

The sun helps to make plants grow. We eat some plants. Small animals and insects eat plants, too. Bigger animals eat the insects.

When we eat food, it changes. All the good things in food are turned into **stored energy**. When we do something, our bodies use up this stored energy.

Questions

1 Where does the energy come from to make these things work?

ELECTRICITY

You cannot see electricity, but you can see where it is working all around you.

Can you see where the electricity is working in the picture?

Warning! Electricity is very useful, but you must be very careful with it. If you touch the metal points on a plug or bare electric wires, the electric current can give you a bad shock. It could make your heart stop beating.

Electricity is very useful. It helps us to do many things. With electricity we can switch on a light at night. We can cook our meals. We can keep warm when it is very cold. We can keep cool when it is very hot. We can go from one place to another because electricity is used to make trains move and car engines start.

Thomas Edison, an American, invented the first bulb in 1879.

Count Volta, an Italian, invented the first battery in 1780

Simple Machines

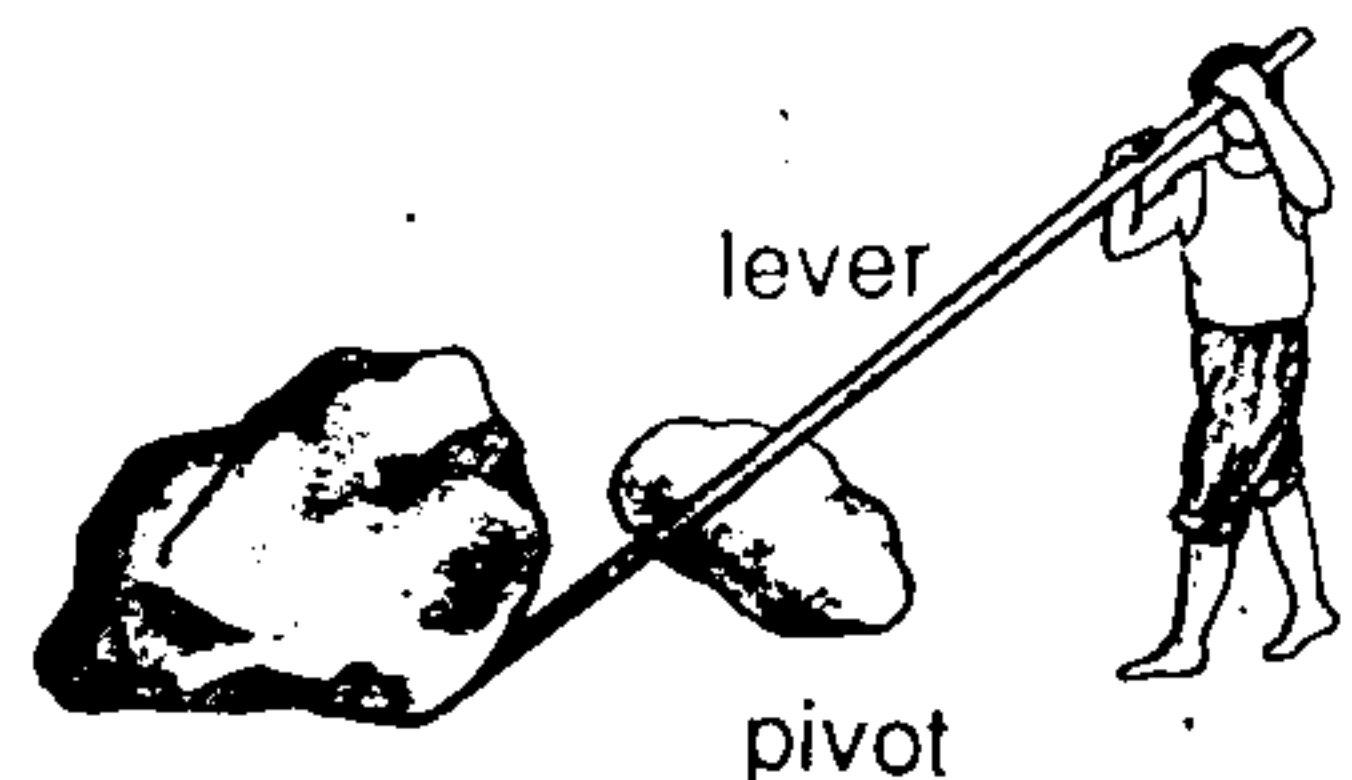
Thousands of years ago, people did everything by using their own muscle power. Sometimes they got animals to do work for them.

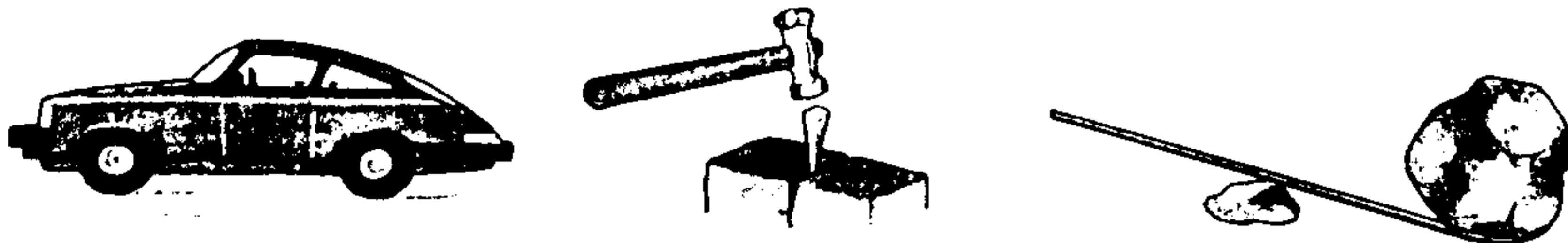
People began to make more things. They grew more food. They went to different places. They invented **machines** to help them. These machines made their work easier.

What are the men trying to do?

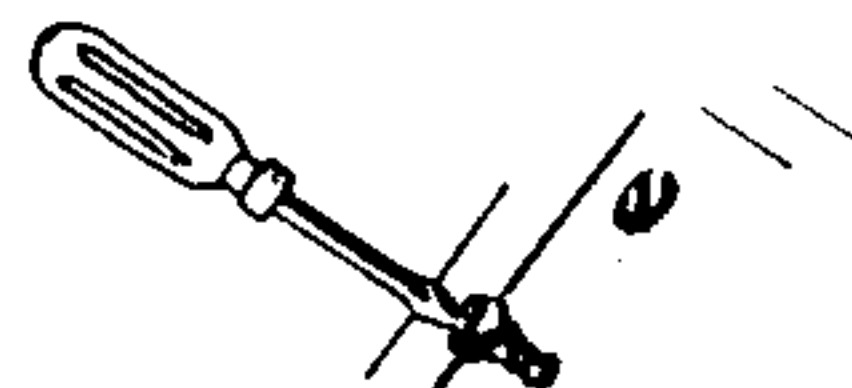
Here are some simple machines

wheel

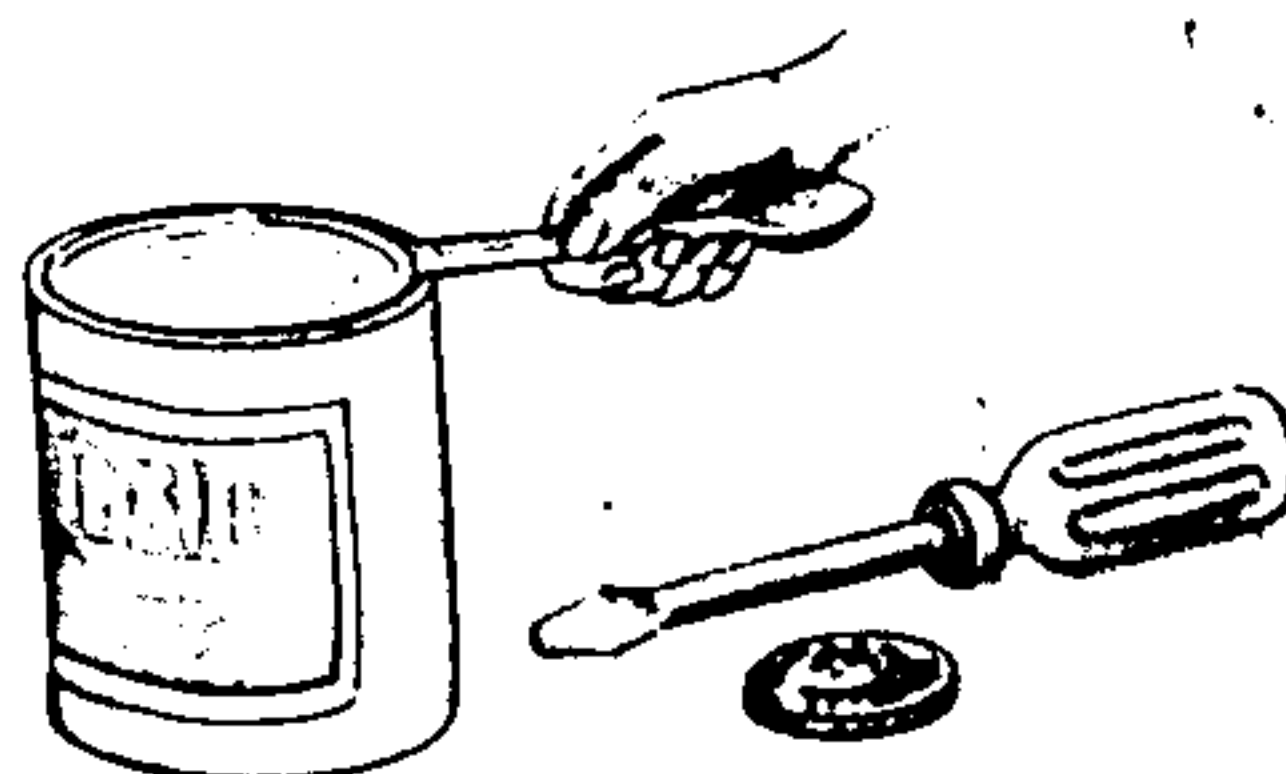
wedge

Work can mean many things. When you come to school you work. When you grow up you may go to work in an office.

In science, **doing work** means **using a force to move an object.** The men on page 70 are all trying to move something. The simple machines shown at the bottom of the page can move objects.

Questions

1 Which man has to use more effort to lift the stone?

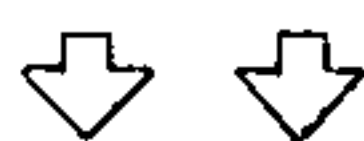
Here are some machines and tools.
You may have seen some of them.
Do you know how they work?

Things to do

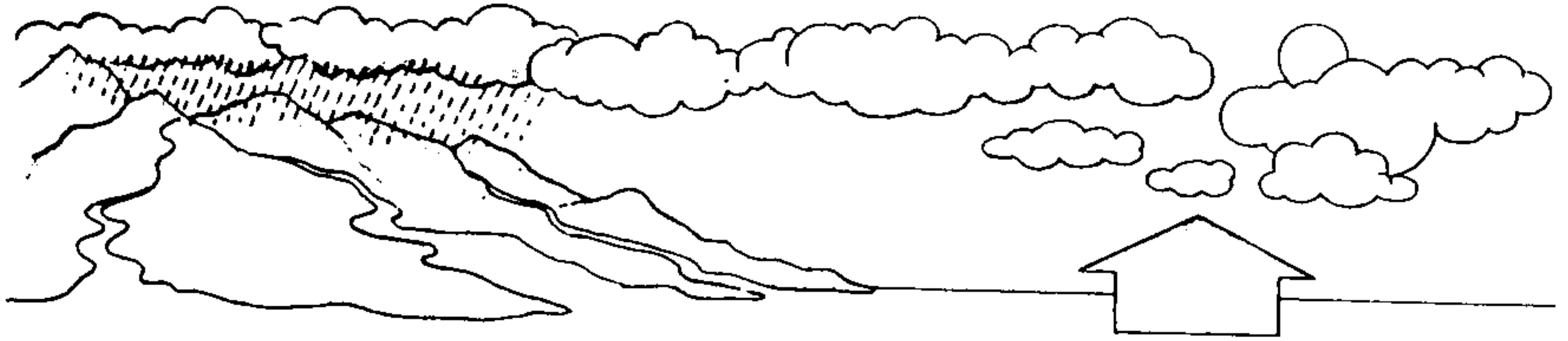
Find an old tin with a tight lid.
Try to open it with a coin.
Try to open it with a spoon.
Try to open it with a long screwdriver.

Which is the easiest to use?

Levers. Try this experiment.

pile of books

push down

stiff ruler

WATER

Do you remember reading about how **rain** is made?

There is **water** in most parts of the earth. There is water in the **seas** and **oceans**. There is water in **streams** and **rivers**. There is water in **lakes**, **ponds** and **tanks**.

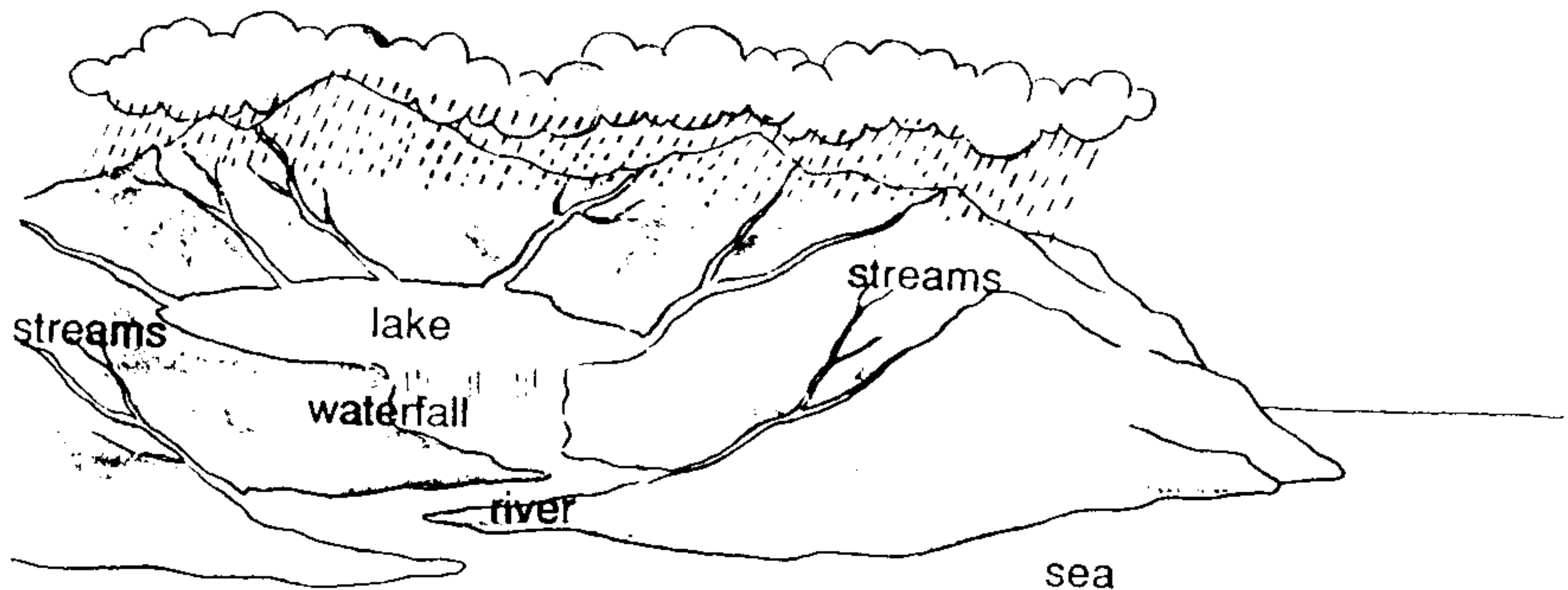
There is quite a lot of water underground, too. We dig deep **wells**. We draw the water from under the ground to the top.

We use water in many ways. Here are some of the ways we use water. Can you think of any other uses?

The water you drink must be **clean**. If you drink **dirty** water you will become **ill**. Dirty water contains many tiny things which you can't see. These tiny things are called **germs**.

The water in the sea is not good to drink. It is very **salty**. Do you know why it is salty?

When rain falls over the land, it forms into puddles and small streams. These streams flow towards the rivers. Much of the rain water **sinks** into the ground.

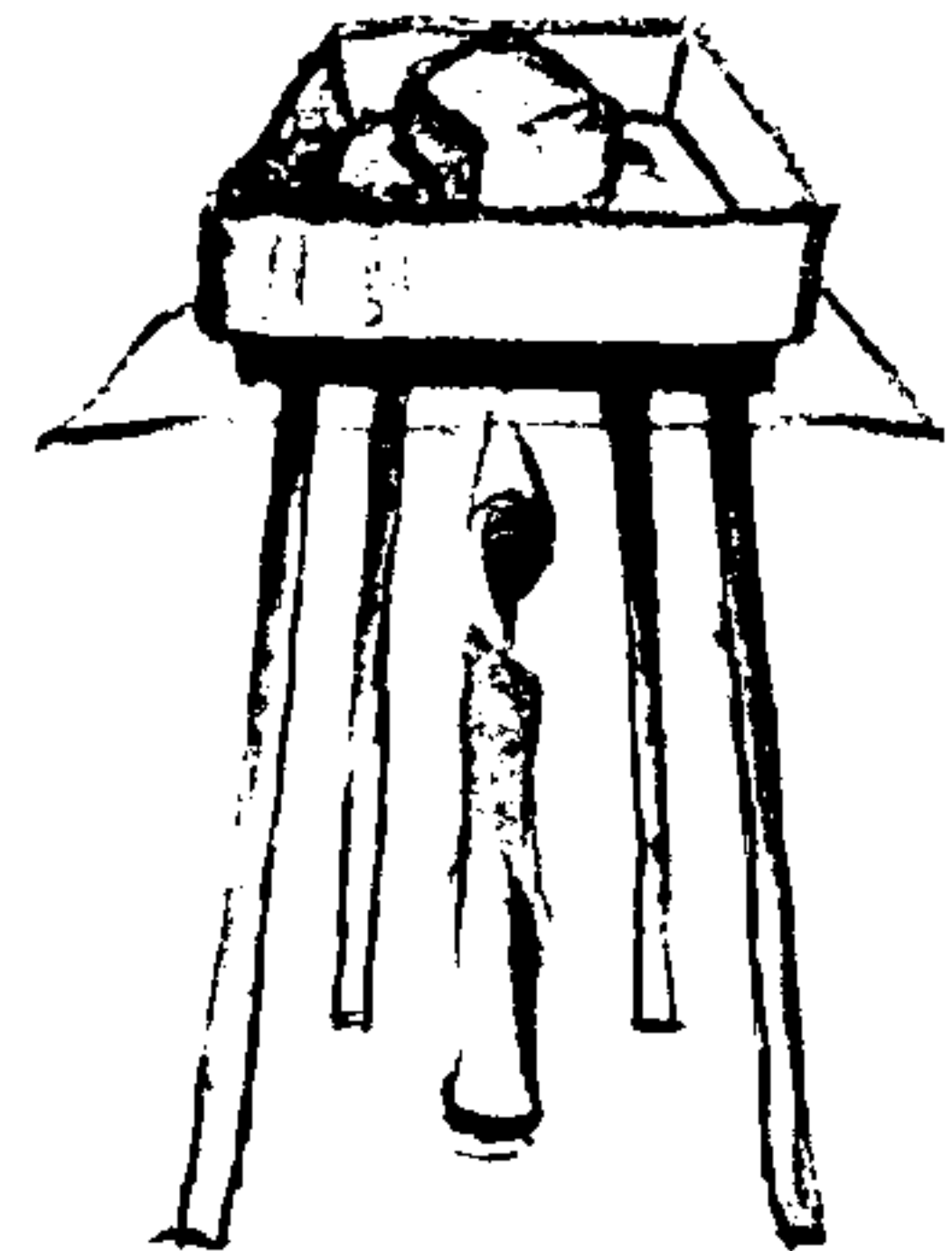
Most of the land is above the level of the sea. Water on the land flows down to the sea. The water passes over many kinds of **soil**. It takes the salt from the soil to the sea. This is why the water in the sea is salty.

We call heavy water **dense**. Salty water is denser than fresh water. Solid things float more easily in dense liquids.

Near Jordan, there is a sea. It is called the **Dead Sea**. The water in this sea is very salty. People can float in it without swimming.

States of Water

Water is found in nature in three states: solid, liquid and gas (water vapour). Snow and ice are water in its solid state. Rivers, springs, seas and oceans are water in its liquid state. Steam, clouds and water vapour are water in its gas state.

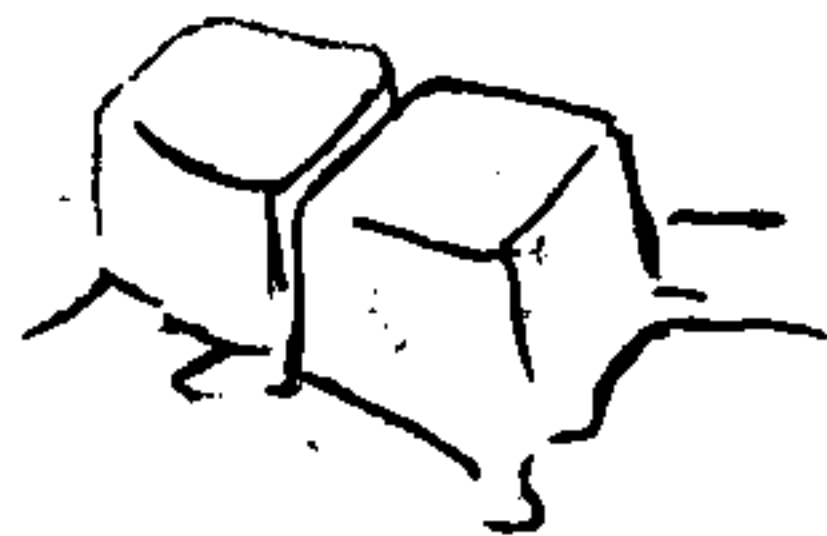
Activity 3

Place a cube of ice in a steel dish and see how it melts.
Now, put the dish over a flame. After a few minutes, look at it.
Does it still contain water? Where has the water gone?

Activity 4

These pictures show water in its three states.
Write down the correct state under each picture.

____

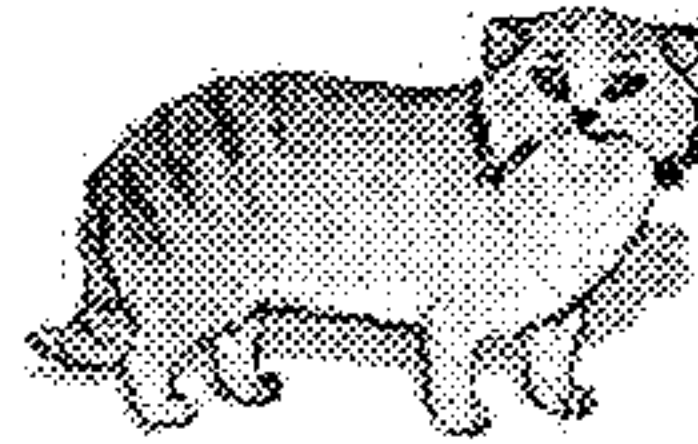
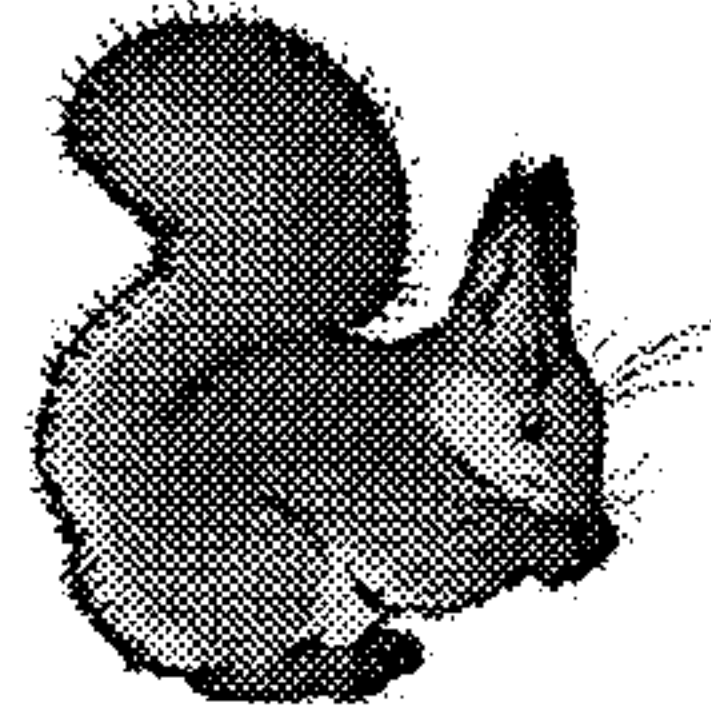
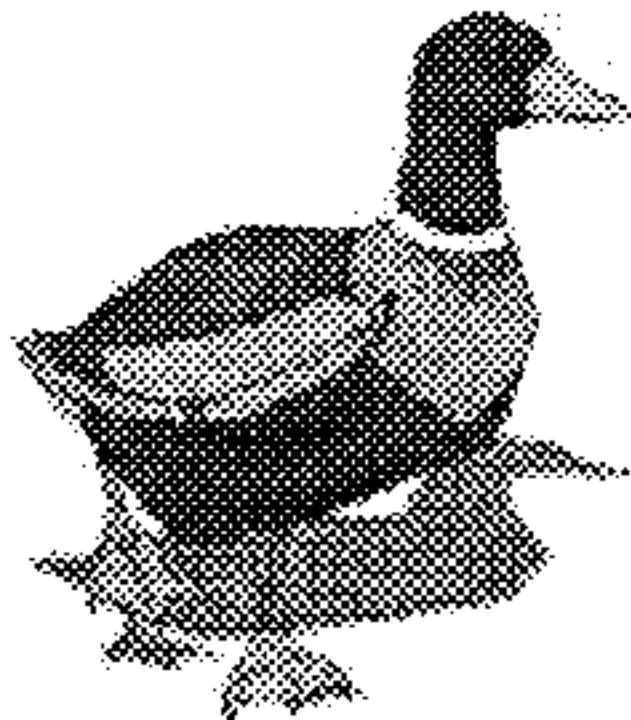
____

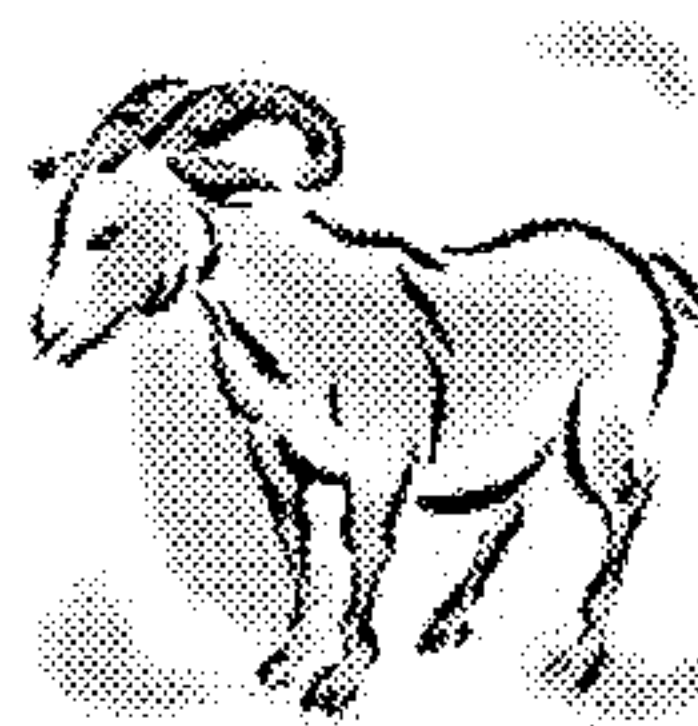
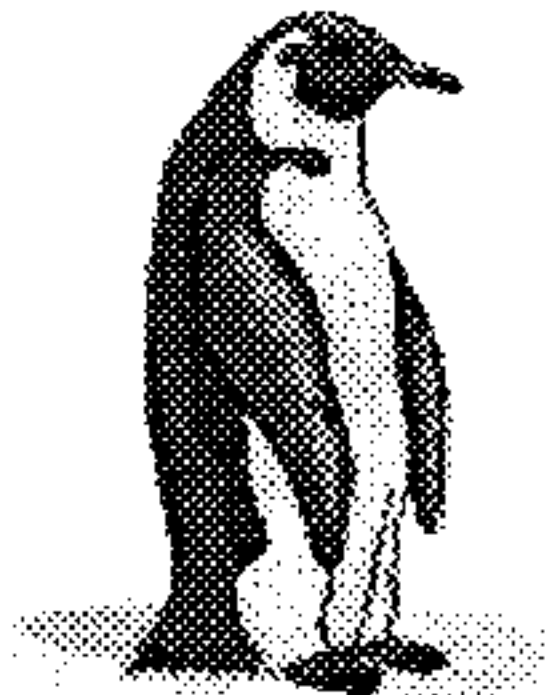
____

Science Worksheets

Level 2

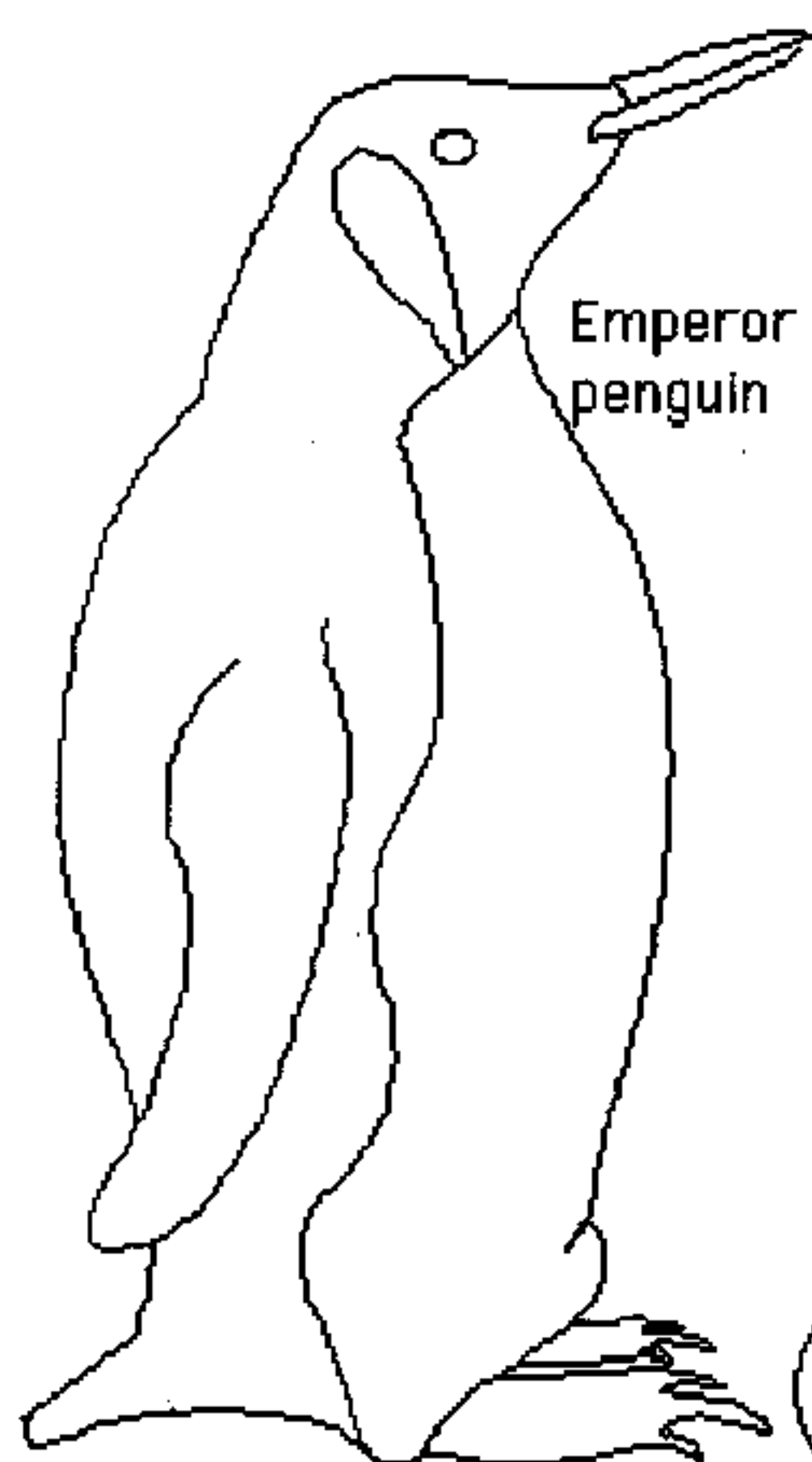
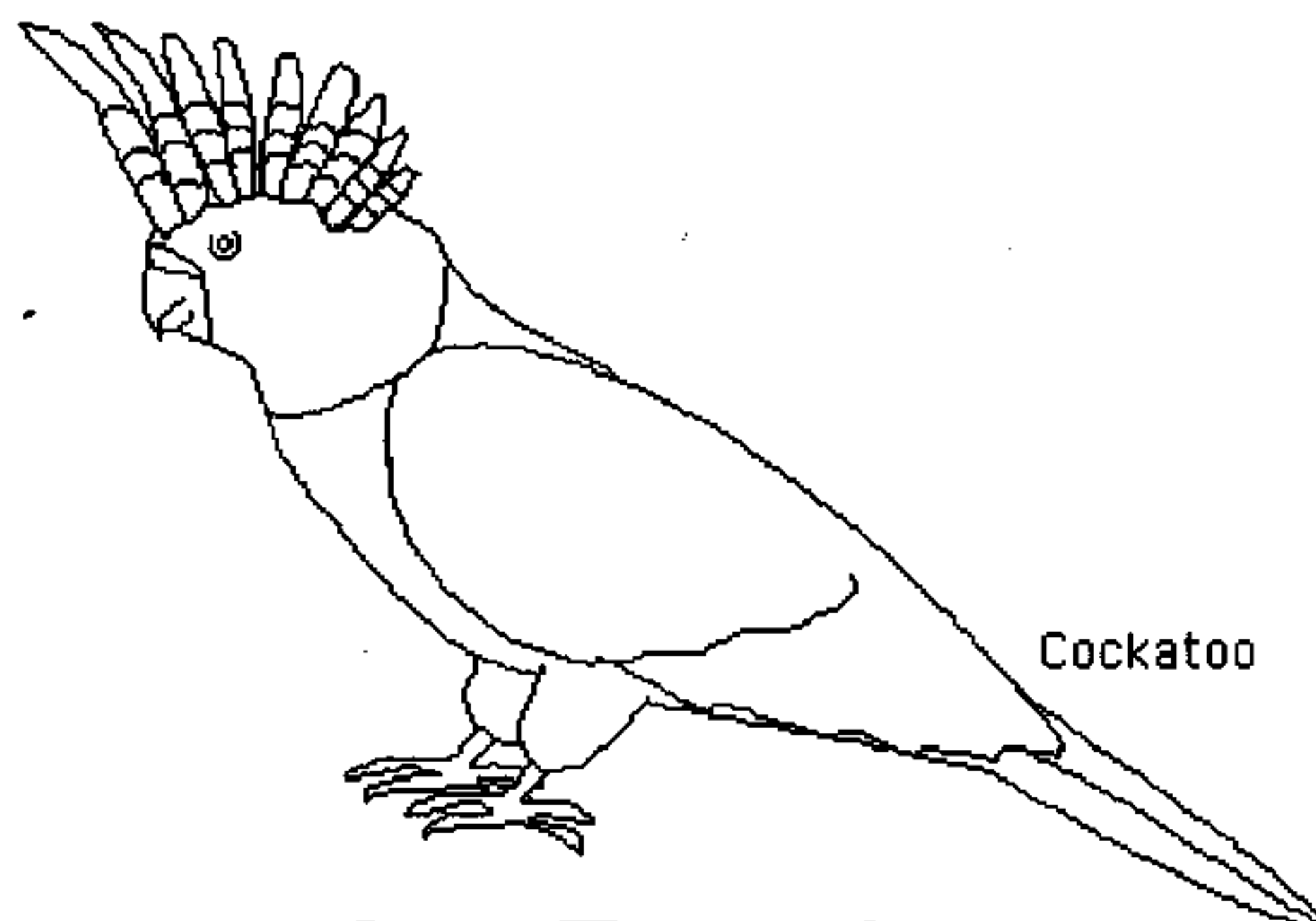
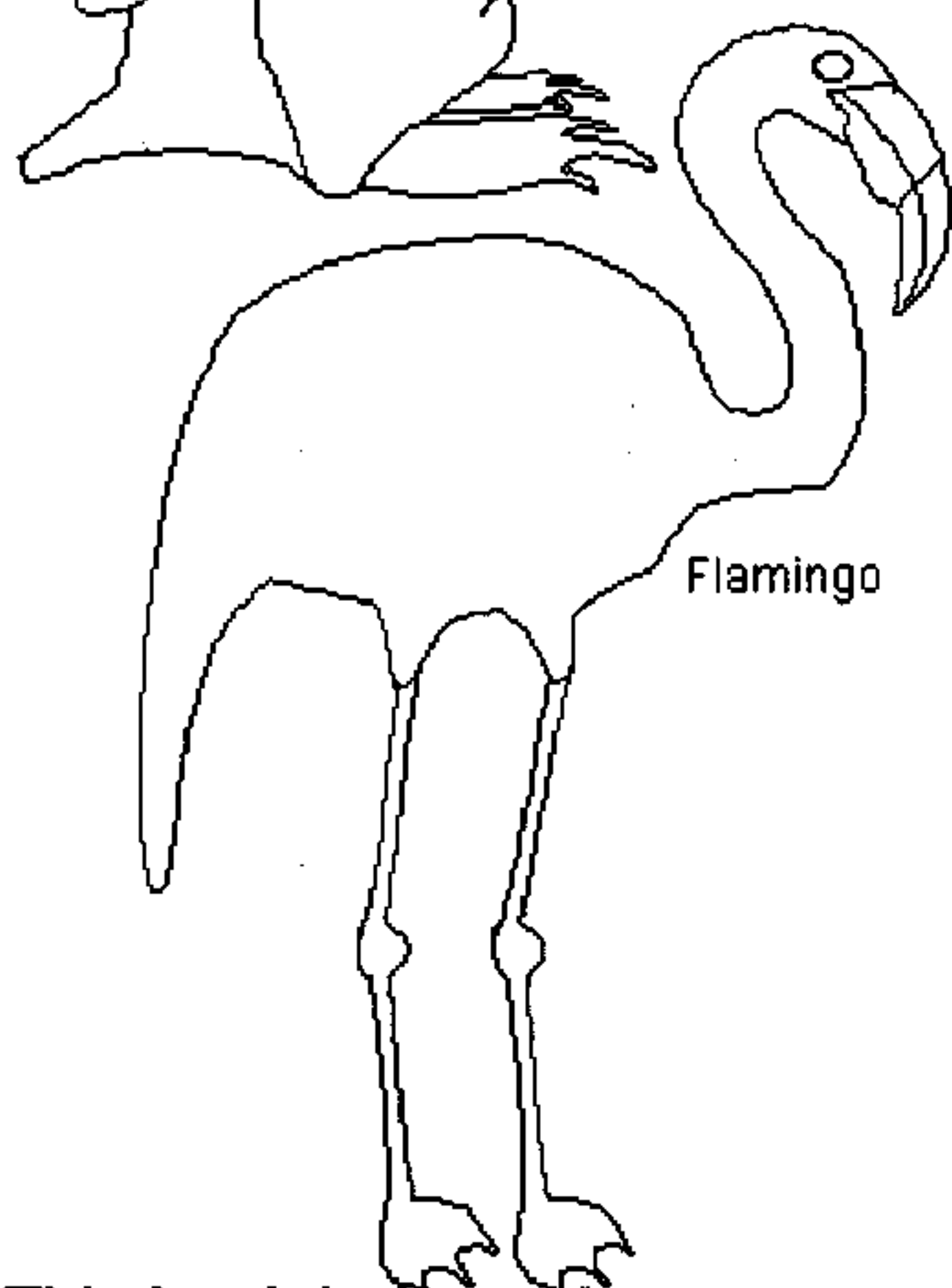
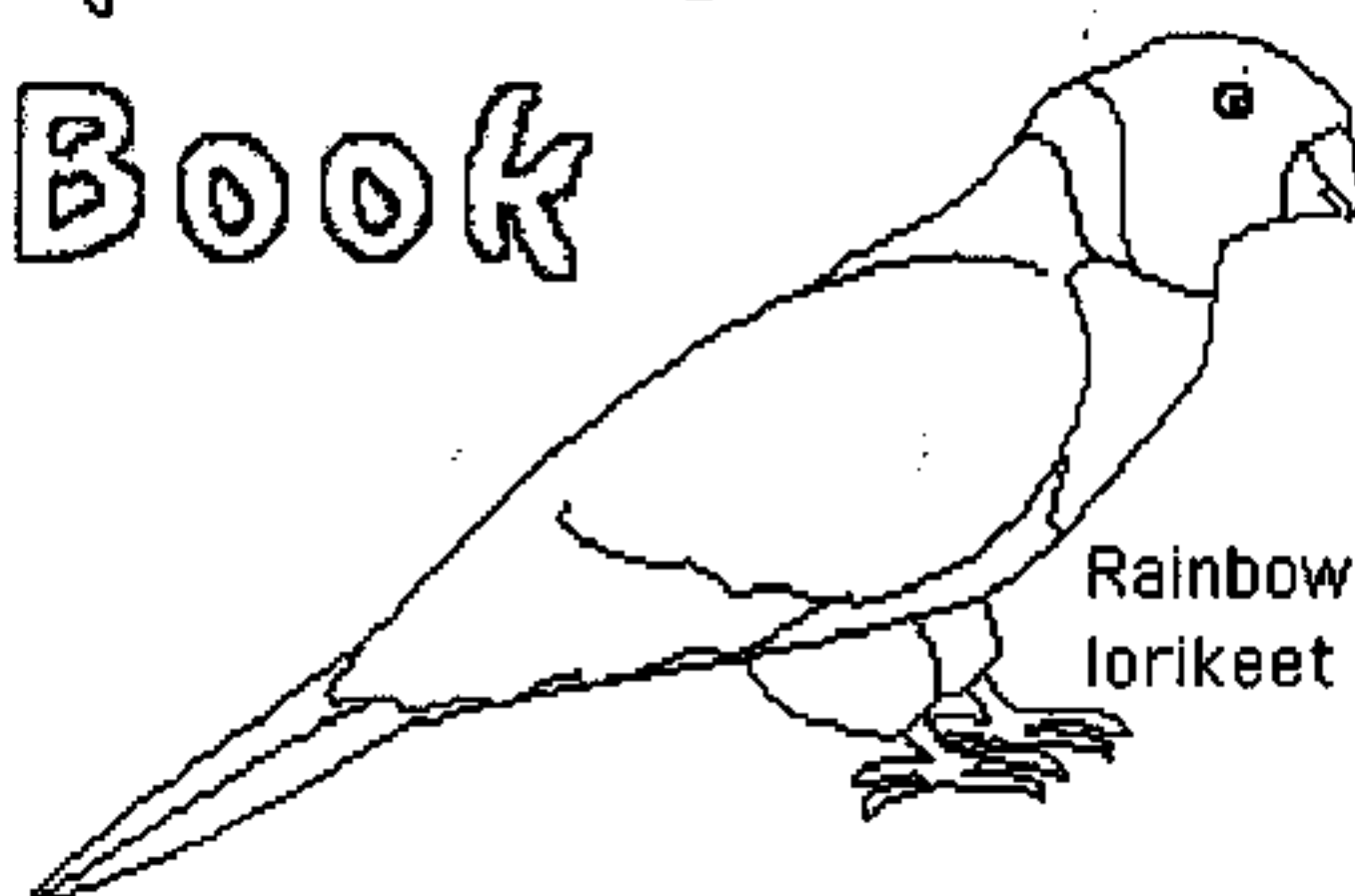
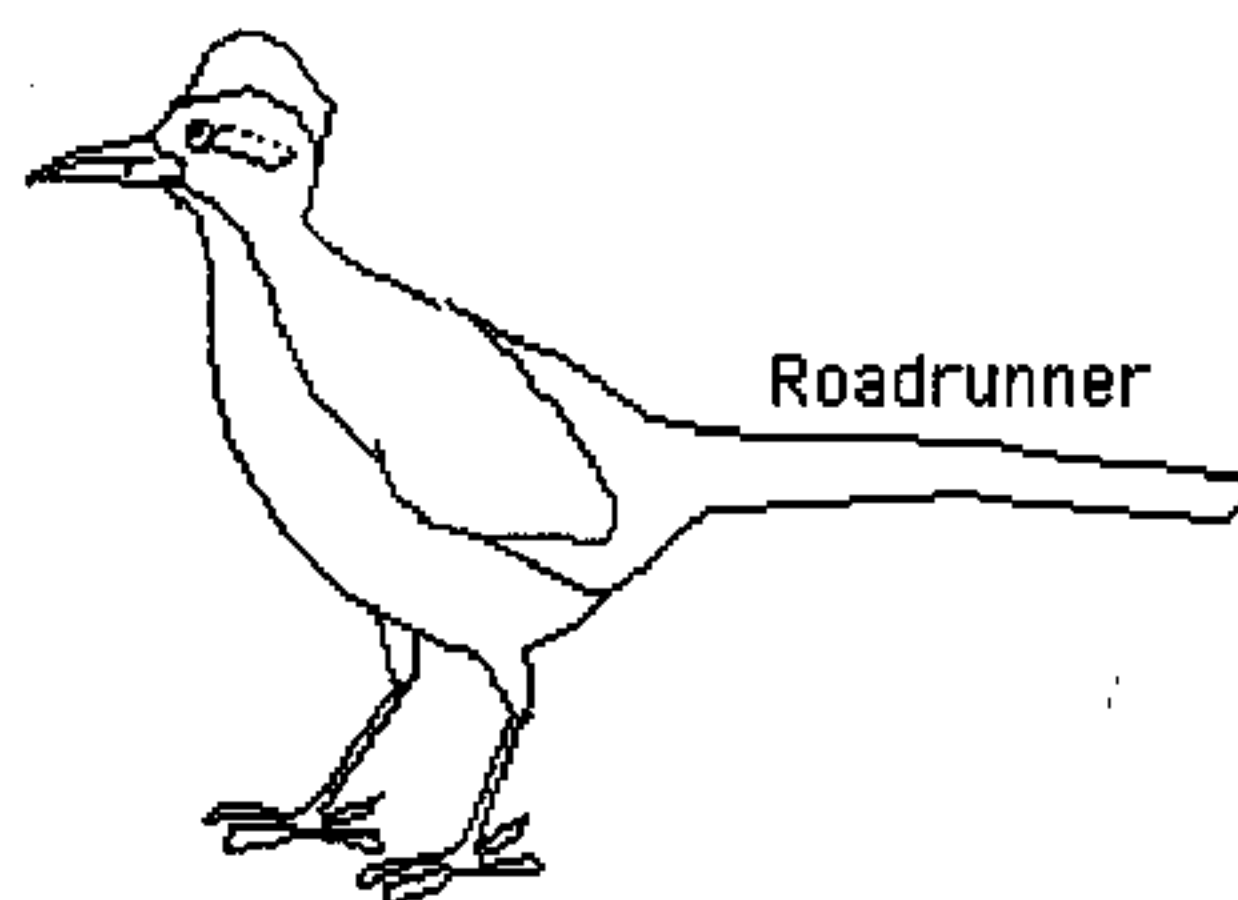
Science Worksheets

Level 2

Q 3) Look at these pictures and sort these animals in groups as given in the table.

Animals with fur	Animals with feathers

Q 4) Sort these animals in groups as given in the table.

Crocodile Monkey Goat

Penguin Sparrow Rat

Deer

Animals with short tails	Animals with long tails

This book belongs to: ______________________________

Today's date is ________________

Level 2 Term 1
Week 5 Day 2

Migration (Worksheet)

Read this paragraph and answer the questions?

Animals do many different, amazing things to get through the winter. Some of them "migrate." This means they travel to other places where the weather is warmer or they can find food.
Birds migrate in autumn.
They travel in large flocks.
Birds know it is winter by feeling changes in amount of daylight and the weather.
Other than birds some kinds of fish, butterflies also migrate.

Why do animals migrate?
- For food
- For warm weather
- For meeting other animals

In which season do birds migrate?
- Autumn
- Summer
- Spring

How do most birds travel?
- In flocks
- Alone

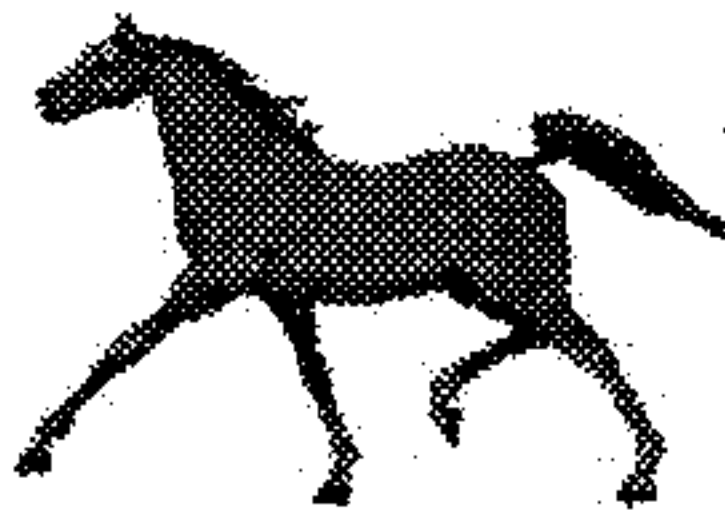
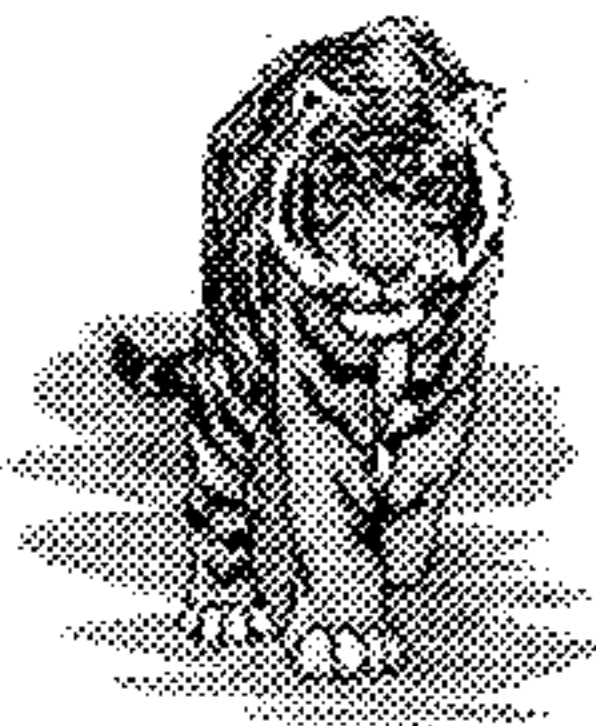
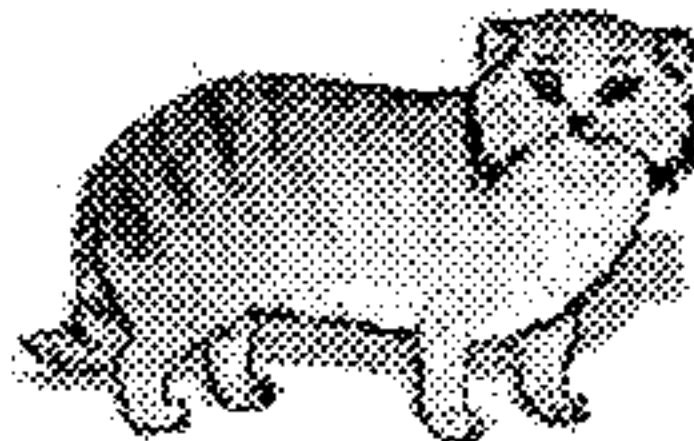
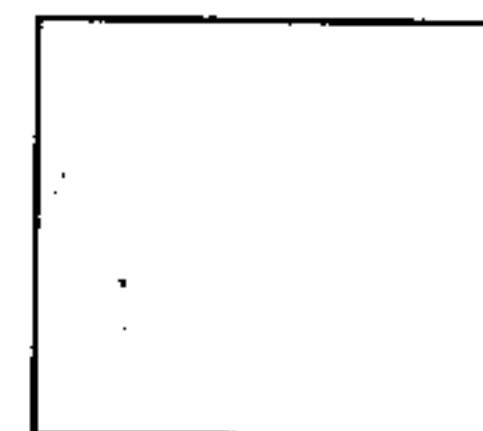
How do birds know it is time for winter?
- By feeling changes in the amount of daylight and the weather.
- Shortage of water

Which of these animals migrate?
- Birds
- Butterfly
- Lion
- Elephants
- Fish

Migration means
- Travel to other places
- Staying at one place

Level 2 Term 1
Week 6 Day 3

Animal Movement
Worksheet

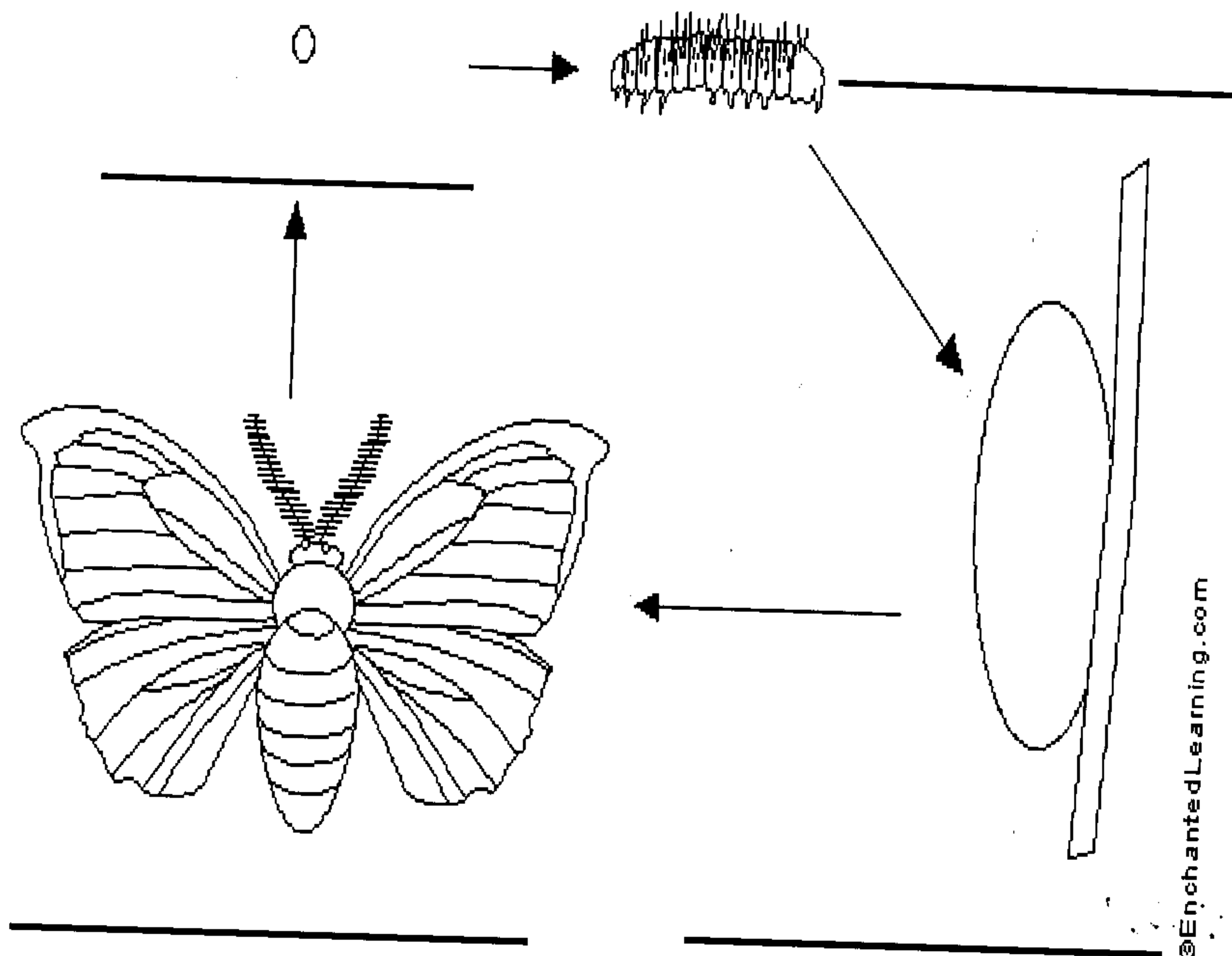
Q 1) How do these animals move? Use words from list to describe.

List: Swim, slither, run, walks, hop, crawl, jump, and fly.

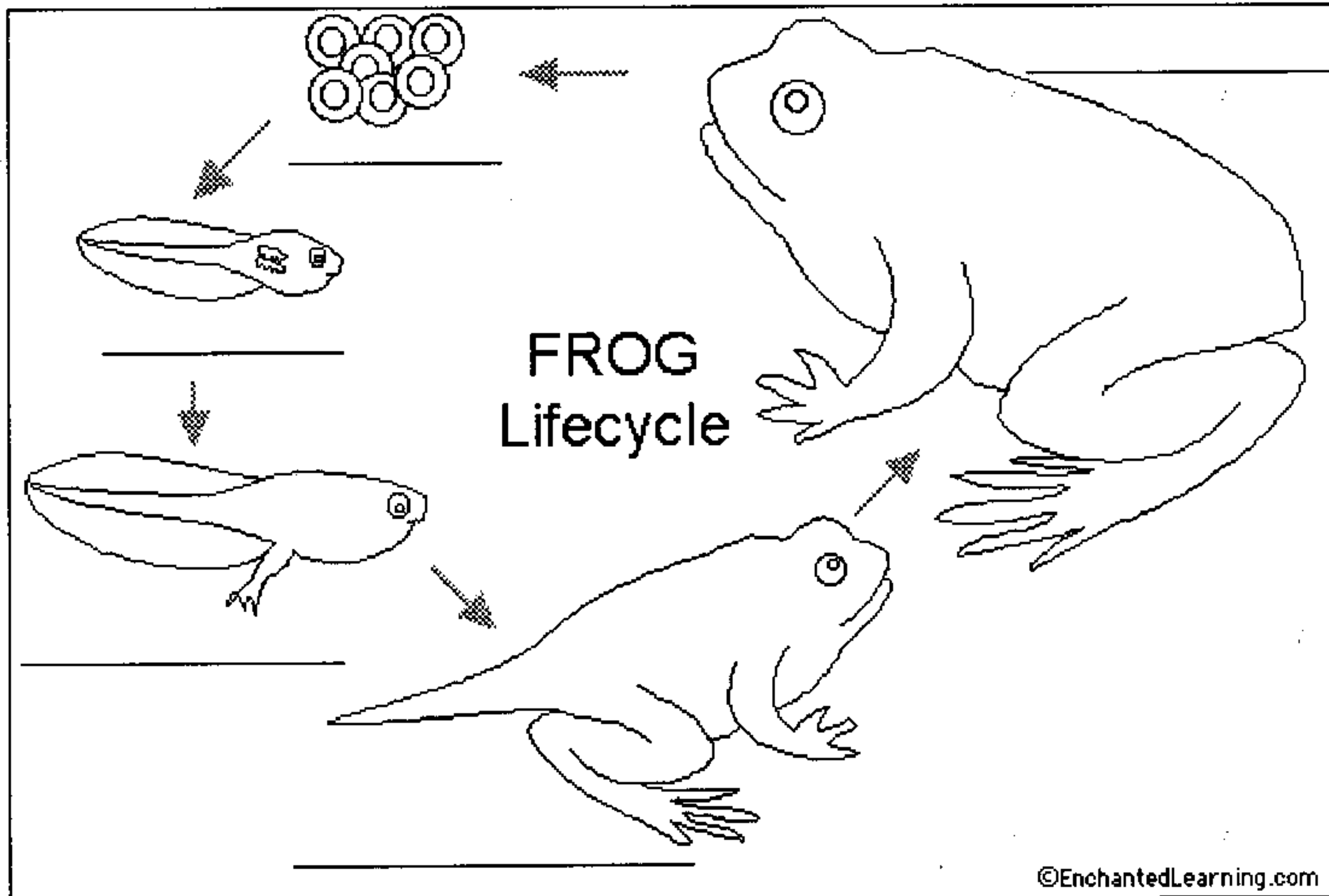
Level 2 Term 2
Week 2 Day 1

Moth Life Cycle
Worksheet

By using the helping words label the stages in life cycle of a moth and color it.

Word Bank: caterpillar, cocoon, egg, moth.

Level 2 Term 2 Week 2 Day 4

Life Cycle of a Frog
Worksheet- 2

Label and color the different stages in the life cycle of a frog.

Q II) Look at the above picture and answer these questions.

What is the baby frog that comes out of an egg called?

____

Does a tadpole have legs?

____

As a baby frog grows, does it grow a tail or legs?

____

As a baby frog grows, what does it lose, its tail, legs, or eyes?

____

Does an adult frog have a tail?

____

Level 2 **Term 2**
Week 4 **Day 1**

Solids
Observation worksheet

- Do these objects have definite shape?

- Can you change their shape?

- Can you feel the objects?

- How do they feel when you touch?

- Can you pass your hand through them?

- Do they have weight?

What do you think these objects are put a tick.

Solids –

Liquids –

Gases –

Level 2 **Term 2**
Week 4 **Day 3**

Liquids
Observation Worksheet

Q I) Observe the liquids and answer these questions.

Does the liquid have definite shape?

No 1 ______________________________

No 2 ______________________________

No 3 ______________________________

When you move the bottle how does it flow?
Slowly/ Quickly

No 1 ______________________________

No 2 ______________________________

No 3 ______________________________

Can you change its shape?

No 1 ______________________________

No 2 ______________________________

No 3 ______________________________

Can you see through it?
No 1 ______________________________

No 2 ______________________________

No 3 ______________________________

What happens to it when you shake it?

No 1 ______________________________

No 2 ______________________________

No 3 ______________________________

Name the liquids.

No 1________________________

No 2____

No 3____

Q II) Draw a picture of these liquids when the bottle is tilted on its side.

Level 2 Term 3
Week 6 Day 6

Bouncing
Worksheet

I) Draw any two things, which you think can bounce.

II) Complete these sentences

a) A ball bounces because of ________________________. (air inside it, its size)

b) A ball will bounce higher__________________________. (On a soft surface, On a hard surface

c) Different balls bounce in a different way because of__________________________.
________________________.

(the material they are made up of, the air in them, their size).

III) Encircle the things which will bounce on a hard surface.

- **Ping-pong ball**
- **Tennis ball**
- **Balloon filled with air**
- **Ball made of iron**
- **Ball made of solid wood**
- **Balloon filled will water**
- **Football**

A pillow

Level 2 Term 4
Week 1 Day 3

Position of objects
Worksheet

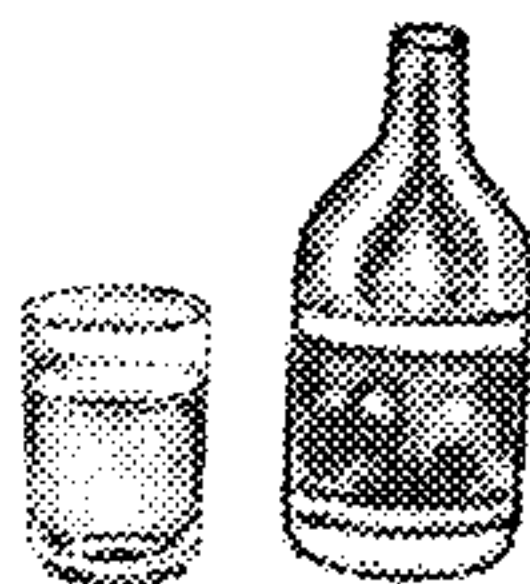
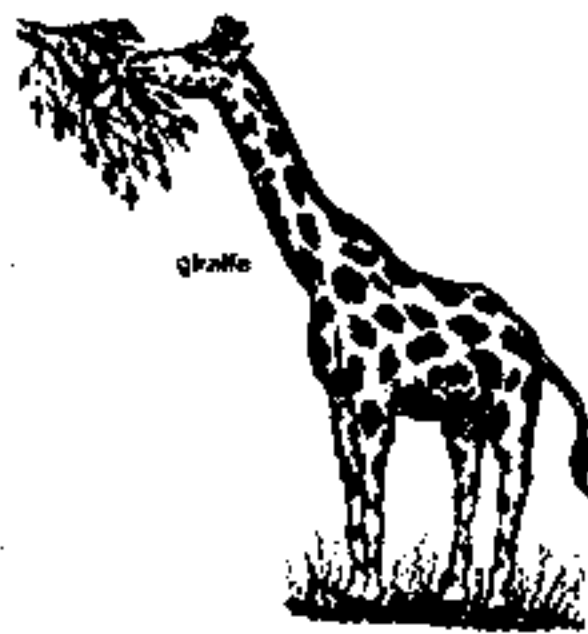
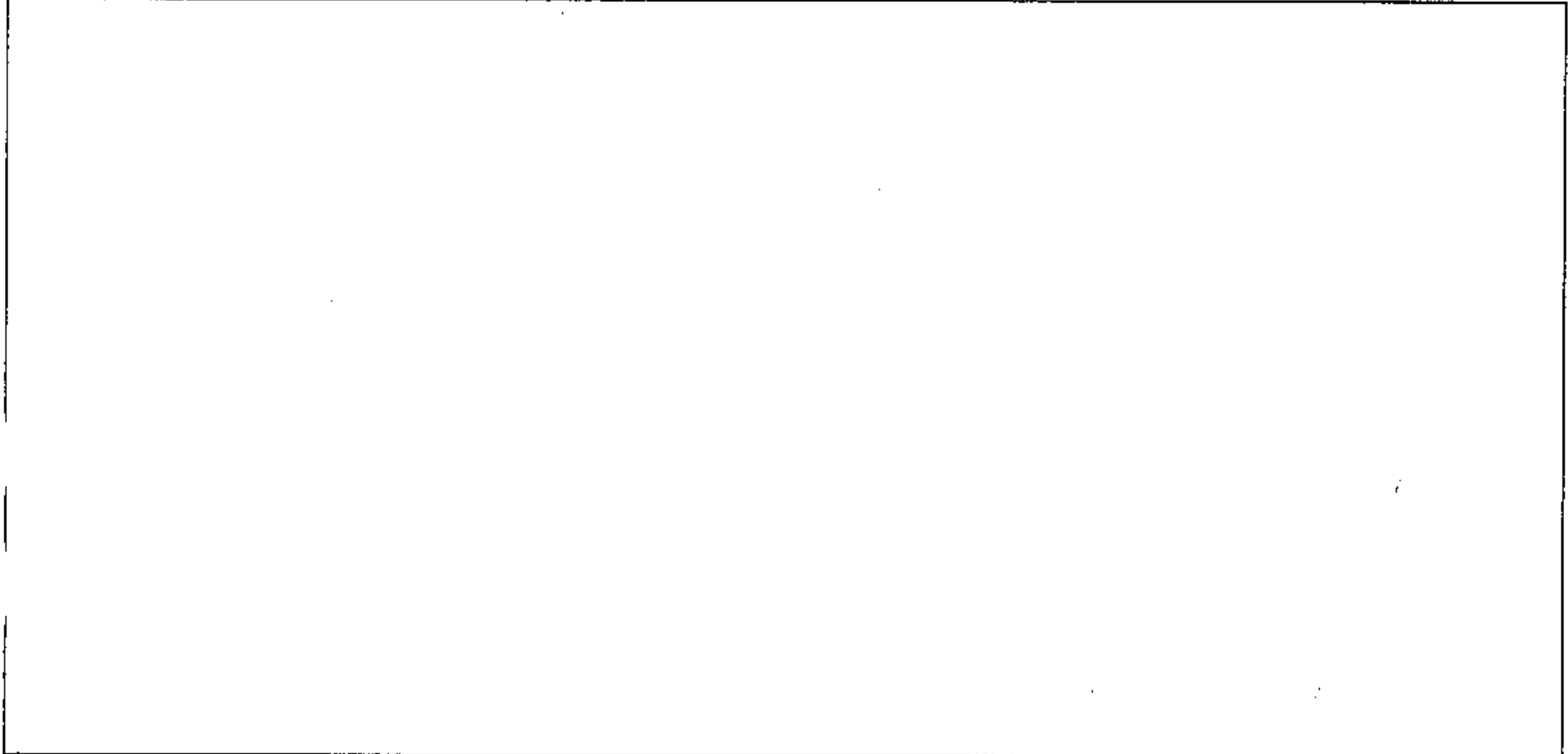
Q 1) Describe the position of these objects in relation to one another by using the words over, near and beside.

____

____

____

____

______________________________ ______________________________

Level 2 Term 4
Week 6 Day 3

Water in the air
Worksheet

Name____

Date____

Q 1) Draw what you have observed.

Q 2) What did I see?____

____

____

____

____

Q 3) Is there water in the air?

____

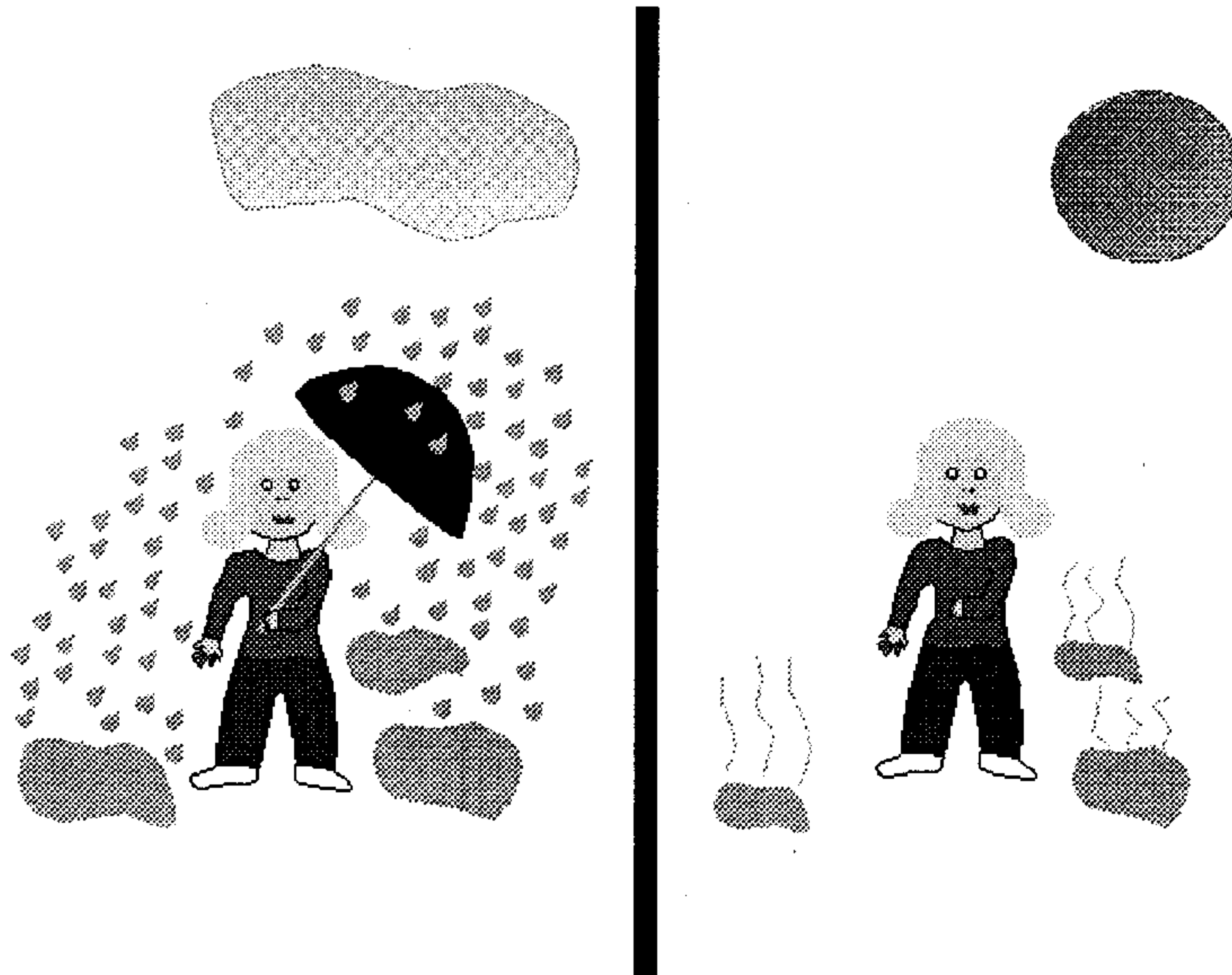
Q 4) Water in the air is in the form of____________________________________.

(Water vapors, water droplets)

Q 5) Water vapor is____.

(Water in gas form, water in solid form)

Level 2 Term 4
Week 7 Day 1

Moisture in environment
Worksheet

Look at the above pictures and answer these questions.

Q 1) How does water go in the air?

____

____

Q 2)What makes up the clouds?

____

____

Q 3) What makes up the rain?

____

____

____

Level 2 Term 4
Week 7 Day 2

·Drying
Reinforcement worksheet

Q 1) What happens to things when they dry?

- **Water evaporates and goes in the air**
- **They get more water from the air**

Q 2) What makes things to dry quickly? Put a tick

- **Heat**
- **Moving air**
- **Moisture in the air**

Q 3) Which things will dry quickly? Put a tick.

- **Wet clothes hanging in the sun**
- **Wet papers in the room**
- **Wood placed under the sun**
- **Wet towel placed under the fan**

Q 4) Draw what you saw.